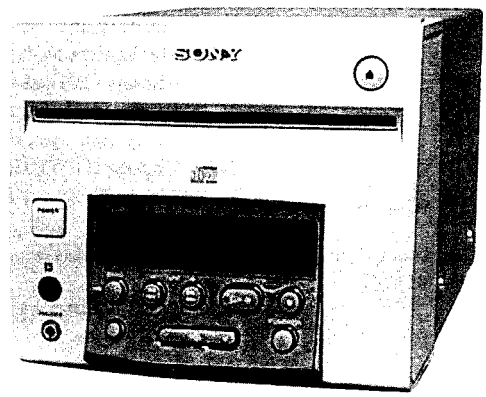
HCD-101

SERVICE MANUAL

AEP Model
UK Model
E Model
Tourist Model



• HCD-101 is the CD PLAYER, TUNER and AMPLIFIER sections in CMT-101.

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM50
Optical Pick-Up Type	KSS-313A

SPECIFICATIONS

Tuner section

Tuning range
2 band model
European model: FM : 87.5-108MHz (50kHz step)
AM : 522–1,611kHz
Other models: FM : 87.5–108MHz (50kHz step)
AM : 531–1,602kHz (at 9kHz interval)
530–1,710kHz (at 10kHz interval)
3 band model FM : 87.5–108MHz (50kHz step)
MW : 522–1,611kHz (at 9kHz interval)
LW : 144–288kHz (at 3kHz interval)
Intermediate frequency FM : 10.7MHz
AM : 450kHz
Aerial terminals FM : 75Ω unbalanced
AM : External aerial terminal
Timer Quartz lock system
Timer setting One-minute step
Sleep timer 10–minute step, max. 90minutes

CD player section

System Compact disc digital audio system
Laser Semiconductor laser (λ=780nm)
Laser output power Less than 44.6μW*
* This output is the value measured at a distance of 200mm from the objective lens surface on the optical pick-up block with 7mm aperture.
Frequency response 5Hz–20kHz
Signal to noise ratio More than 90dB
Harmonic distortion Less than 0.05%

Amplifier section

European model:
DIN power output 15+15 W (4Ω at 1kHz, DIN
Continuous RMS power output 21+21 W (4Ω at 1kHz, 10% THD)
Music power output 26+26 W
Other model
Rated RMS power output 16+16 W (4Ω at 1kHz, 1% THD, AC240V/AC120V)
Reference RMS power output 22+22 W (4Ω at 1kHz, 10% THD, AC240V/AC120V)
Inputs VIDEO/PC IN jack : Stereo phone jack, sensitivity 500mV, impedance 47kΩ

— Continued on next page —

COMPACT COMPONENT SYSTEM

MICROFILM

SONY®

Outputs	VIDEO/PC OUT jack : Stereo phone jack, 250mV, 1kΩ DIGITAL OUT (CD OPTICAL OUT): Square optical connector jack, −18dBm, wave jength 660nm PHONES (headphones) jack : Stereo mini jack, accepts head phones of 8Ω or more.

General

Power requirements	
European model	220–230V AC, 50/60Hz
Other models	110–120V or 220–240V AC, 50/60Hz adjustable with voltage selector
Power consumption	66W (when connected to TC-TX101, MDS-MX101)
Dimensions	Approx. 142×125×260mm (w/h/d) incl. projecting parts and controls
Mass	Approx. 4.1kg

SERVICE NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

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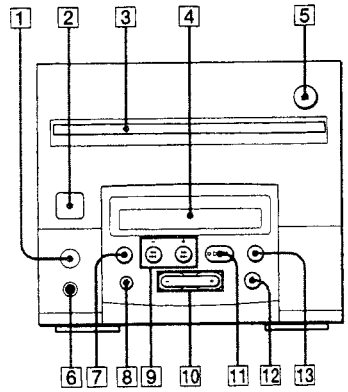
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

This section is extracted from instruction manual.

Step 1: Name of control and display



1 Remote control signal sensor
2 Power switch
3 CD insertion slot
4 Display window
5 ⏏ (CD EJECT) button
6 PHONES terminal
7 BAND button
8 DBFB button
9 ⏮◀◀/▶▶⏭ (Cue-up musics, or fast rewind / fast forward) button
10 VOL+/– button
11 ▶II (CD playback or pause) button
12 FUNCTION button
13 ■ (CD stop) button

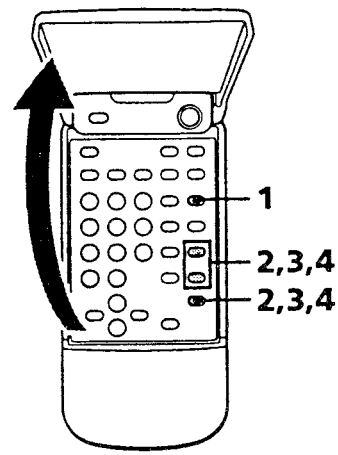
Step 2: Setting the time

Before turning on the system, you must set the time beforehand to use the timer function.

The clock is on a 24 -hour system for the European model, and a 12-hour system for other models.

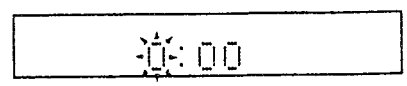
The European model is used for illustration purpose.

Remote (inside)

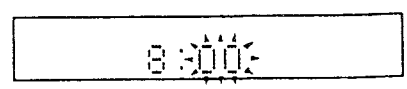


1 Press TIMER SET.

2 Press TIMER + or – to display "CLOCK" and press ENTER.
The hour indication begins flashing.

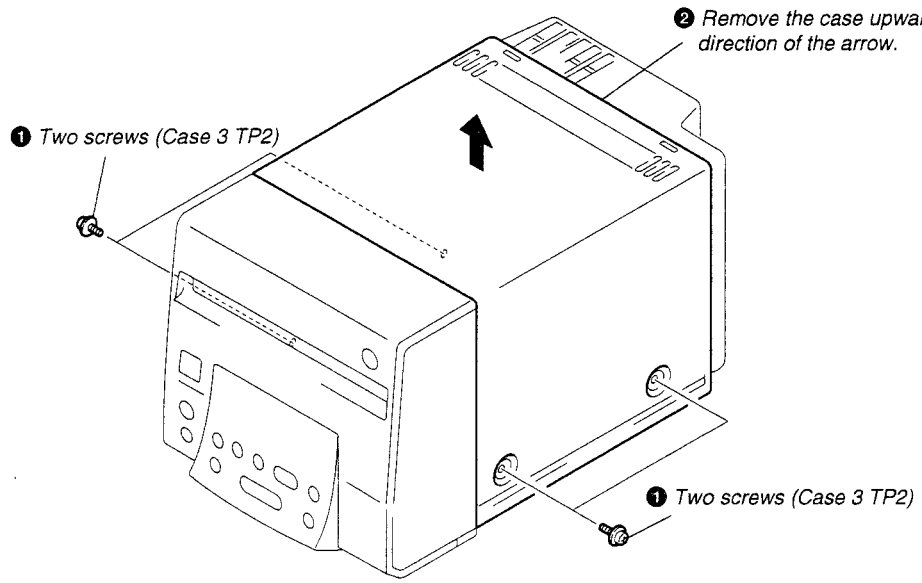


3 Set the current hour by pressing TIMER + or – and press ENTER.
The minute indication begins flashing.

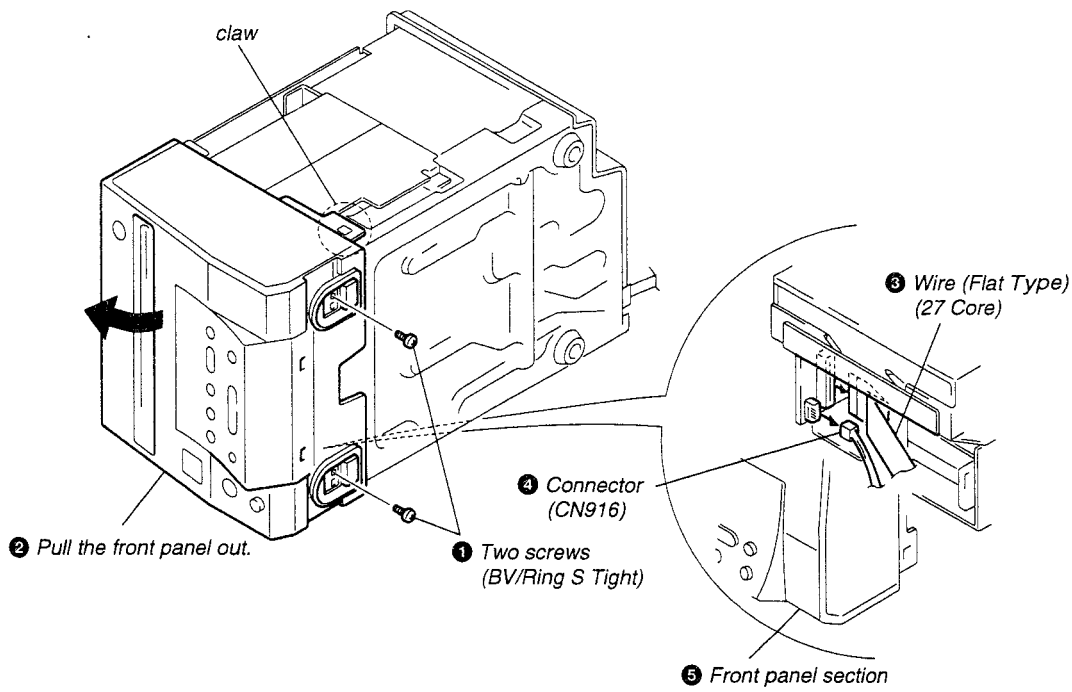


SECTION 2
DISASSEMBLY

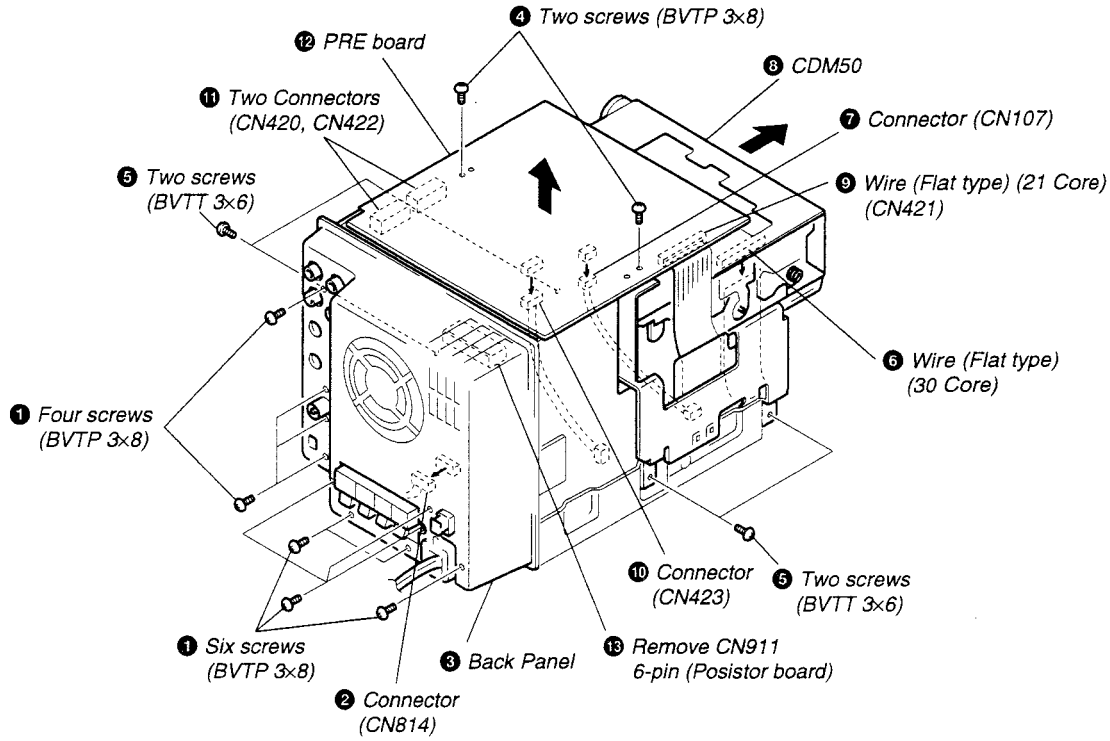
2-1. CASE



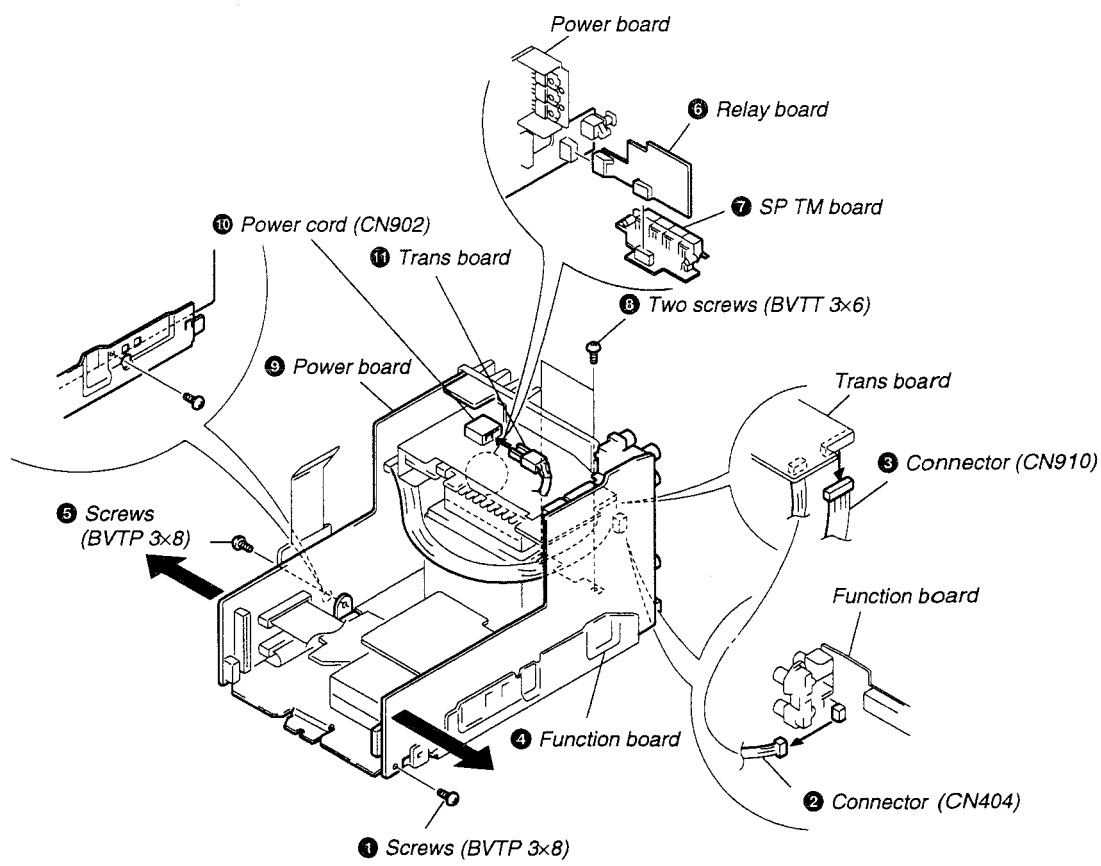
2-2. FRONT PANEL SECTION



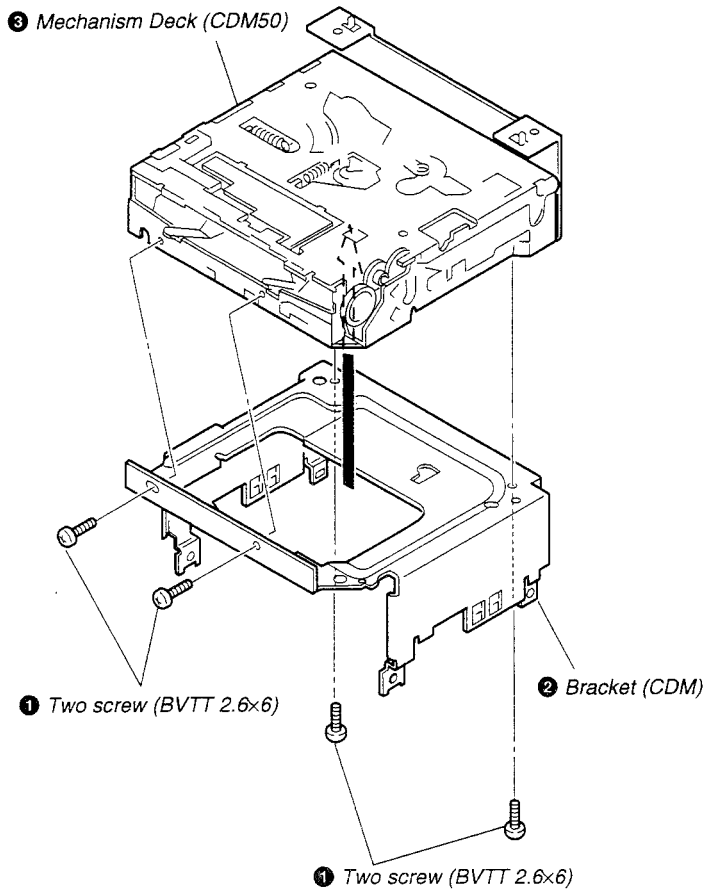
2-3. PRE board


❹ Two screws (BVTP 3×8)
⓬ PRE board
❽ CDM50
⓫ Two Connectors (CN420, CN422)
❼ Connector (CN107)
❺ Two screws (BVTT 3×6)
❾ Wire (Flat type) (21 Core) (CN421)
❻ Wire (Flat type) (30 Core)
❶ Four screws (BVTP 3×8)
❿ Connector (CN423)
❺ Two screws (BVTT 3×6)
❶ Six screws (BVTP 3×8)
❸ Back Panel
⓭ Remove CN911 6-pin (Posistor board)
❷ Connector (CN814)

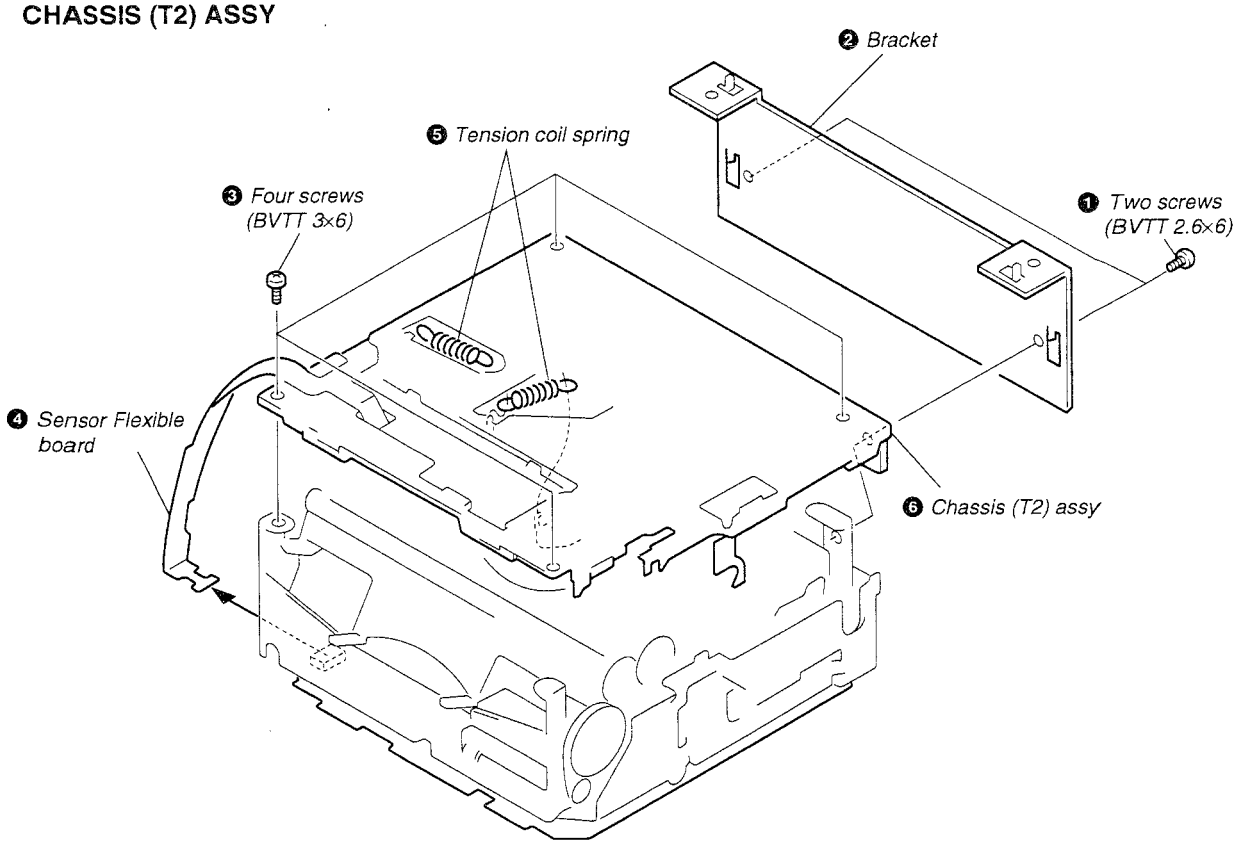
2-4. FUNCTION board, RELAY board, SP TM board, TRANS board, POWER board



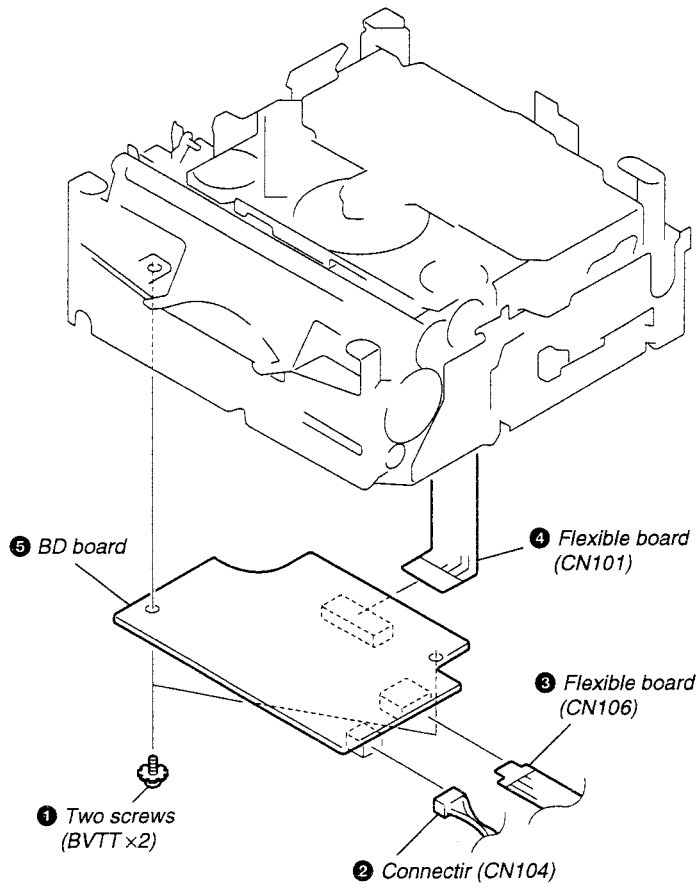
2-5. MECHANISM DECK (CDM50)



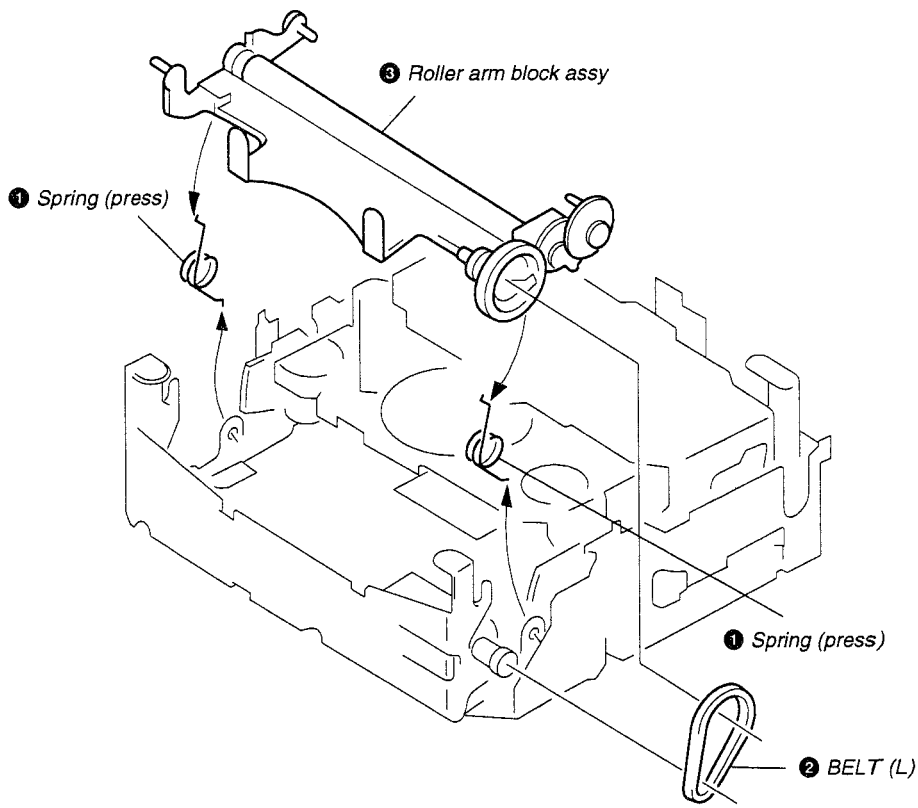
2-6. CHASSIS (T2) ASSY



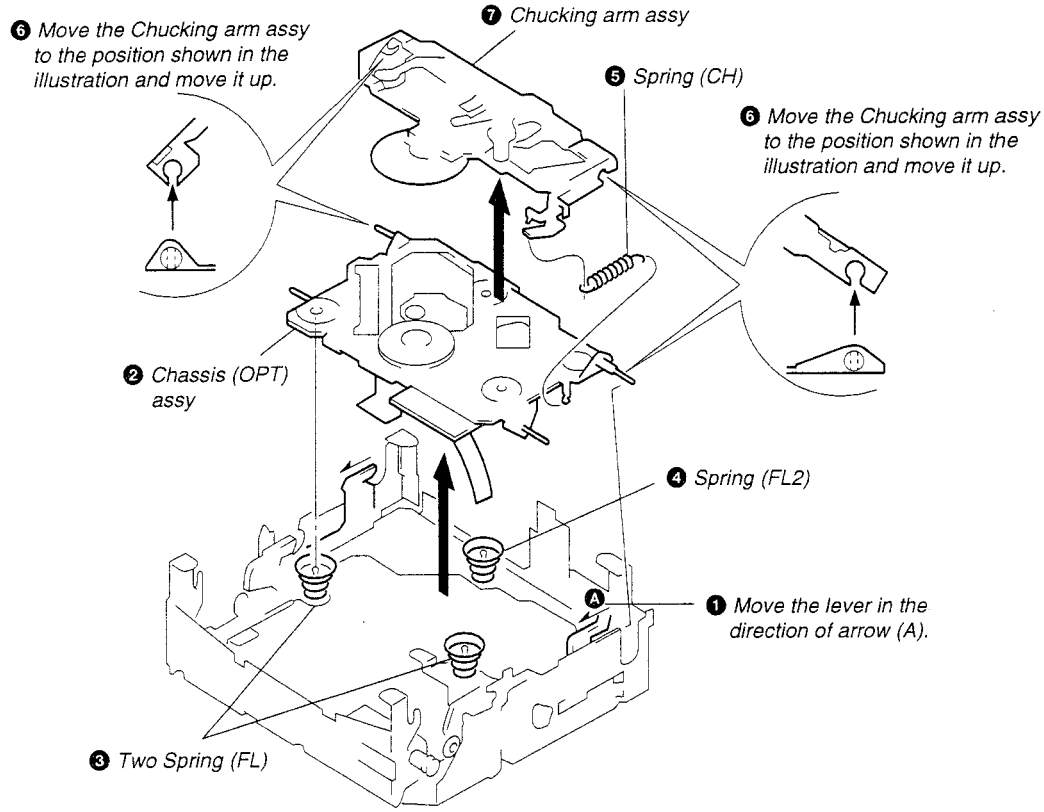
2-7. BD board



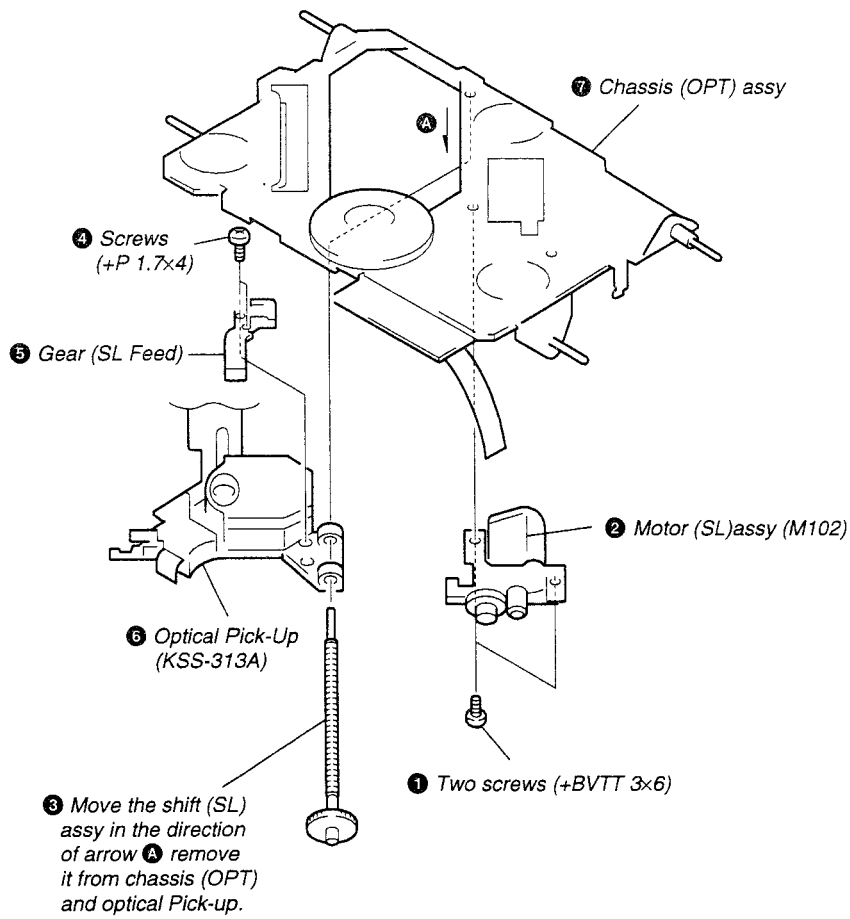
2-8. ROLLER ARM BLOCK ASSY



2-9. CHASSIS (OPT) ASSY, CHUCKING ARM ASSY


❻ Move the Chucking arm assy to the position shown in the illustration and move it up.
❼ Chucking arm assy
❺ Spring (CH)
❻ Move the Chucking arm assy to the position shown in the illustration and move it up.
❷ Chassis (OPT) assy
❹ Spring (FL2)
❶ Move the lever in the direction of arrow (A).
❸ Two Spring (FL)

2-10. MOTOR (SL) ASSY (M102), OPTICAL PICK-UP (KSS-313A)


❼ Chassis (OPT) assy
❹ Screws (+P 1.7×4)
❺ Gear (SL Feed)
❷ Motor (SL)assy (M102)
❻ Optical Pick-Up (KSS-313A)
❶ Two screws (+BVTT 3×6)
❸ Move the shift (SL) assy in the direction of arrow Ⓐ remove it from chassis (OPT) and optical Pick-up.

SECTION 3
TEST MODE

There are two methods to enter the TEST mode.

- How to Enter the Test Mode - 1
  Remove the AC power cord from wall outlet, and press [EJECT ⏏]. While pressing [EJECT ⏏], connect the AC power cord to wall outlet.
- How to Enter the Test Mode - 2
  (This method toggles between "Entering the TEST Mode" and "Exiting the TEST Mode".)
  Turn on the main power. While pressing [TUNING +], press [DBFB], release hand from [DBFB] then press [FUNCTION]. (Keep pressing [TUNING] all the way.)
  Pressing these buttons again in the same order exits the TEST mode.

* The small ATT segment lights in the center top of display during the TEST mode.

* To exit the TEST mode, disconnect the AC power cord from wall outlet, or use "How to Enter the TEST Mode - 2".

1. Audio volume control setting (Can be adjusted only during TEST mode.)
   Press [CD STOP ■] and [VOL–] at the same time
   → VOL MINIMUM appears
   Press [CD STOP ■] and [VOL+] at the same time
   → VOL MAXIMUM appears

* The audio volume data is kept stored even after the main power is turned off.

2. Audio balance setting (Can be adjusted only during TEST mode.)
   Press [CD STOP ■] and [DBFB] at the same time
   → LEFT 10 appears
   Press [CD STOP ■] and [FUNCTION] at the same time
   → RIGHT 10 appears
   Press [CD STOP ■] and [CD EJECT ⏏] at the same time
   → CENTER appears

* The audio balance data is kept stored even after the main power is turned off.

3. Key test and FL display tube test (Can be adjusted only during TEST mode.)
   - Press [VOL-] and [BAND] at the same time→All FL tubes light. Pressing the following key in this status enables key checks as follows.

   - Display depending upon the pressed key

[FUNCTION]	→	KEY NO. 1
[VOL –]	→	KEY NO. 2
[VOL +]	→	KEY NO. 3
[BAND]	→	KEY NO. 4
[TUNING+]	→	KEY NO. 5
[EJECT ⏏]	→	KEY NO. 6
[TUNING –]	→	KEY NO. 7
[STOP ■]	→	KEY NO. 8
[PLAY ▶II]	→	KEY NO. 9
[DBFB]	→	KEY NO. 10

   - [POWER] → Returns to the TEST mode

* Note: After all keys are (KEY No.1 to KEY No.10) tested, CHECK OK!! appears.

The following items have no relation with the TEST mode.

4. Initial setting (All clear of all memories)
   Disconnect the AC power cord. While pressing [POWER], connect the AC power cord to wall outlet.

5. Watch operation check (Can be operated only while the main power is off.)
   Press [FUNCTION] and [BAND] at the same time. → Watch starts counting.

Various CD tests

Pressing the two keys at the same time enables the various adjustment and test as follows in the TEST mode, and "ATT" segment is flashing.

1) Pressing [TUNING–] and [CD EJECT ⏏] at the same time :
   The present normal tracking balance value ("31" to "36") is displayed when the above key operation is performed and (TRBAL.) is displayed.

   The tracking gain is fixed to "3F" (TOG1 to TOG2: all off)

2) Pressing [TUNING–] and [DBFB] at the same time :
   (SHUFFLE) is displayed.
   - ADJUSTMENT mode
     When the above key operation is performed, the machine enters the ADJUSTMENT mode. The "SHUFFLE" flashes on display tube.

   During the ADJUSTMENT mode:
   The CLV gain is not switched to 8 cm. (The CLV gain is fixed to 12 cm always.)
   The machine is ready to enter the AF-ADJUSTMENT mode as described below.

3) Pressing [TUNING–] and [FUNCTION] at the same time :
   (SHUFFLE) and (PROGRAM) are displayed.
   - AF-ADJUSTMENT mode
     After the machine enters the ADJUSTMENT mode by the key operation as described in step 2), the machine can enter the AF-ADJUSTMENT mode by pressing the above key operation. [TUNING – /FUNCTION]
     The "SHUFFLE" and "PROGRAM" flash on display.

     During the AF-ADJUSTMENT mode, the tracking and sled servos are turned off in addition to the ADJUSTMENT mode. The machine stops the GFS error check which is normally performed by software.

   - Sled motor check
     When disc is removed by pressing EJECT during the AF-ADJUSTMENT mode, the sled can be moved to inner circumference or outer circumference by pressing [TUNING–] or [TUNING+]. At this time, because the microprocessor is not sensing the sled position, be careful when moving the sled not to damage gears and other mechanism.

4) Pressing [TUNING–] and [VOL–] at the same time :
   - No CDM mode
     [1] is displayed.
     When the above key operation is performed, the control on the slot mechanism which takes in and ejects a CD disc is stopped.
     At this time "1" on the display flashes.

   During the no CDM mode,
   The TOC data is deleted by the [CD EJECT ⏏] key.
   (When the TEST mode is cleared and a CD disc is inserted, machine reads the TOC again.)

5) Pressing [TUNING–] and [VOL+] at the same time :

- Aging mode
  The machine enters the aging mode by inserting a CD disc and performing the above button
  operation. The display starts counting the aging operation with COUNT display, and "REPEAT" flashes.

Aging operation

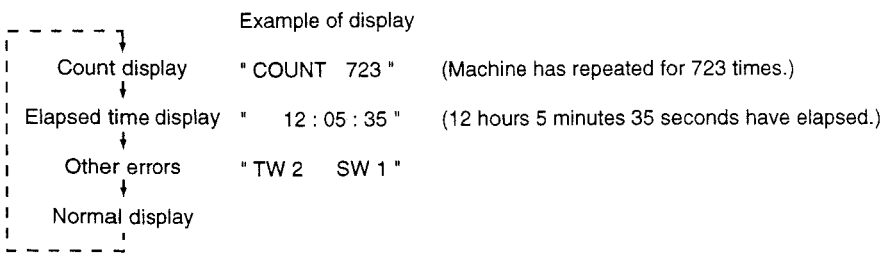
1. Machine takes a disc into the machine.
2. Reads the TOC.
3. Accesses to the last track.
4. Plays back the last 2 seconds.
5. Ejects the disc.

The one complete operation from step 1 to step 5 is one count. The cycle is repeated. However, steps 2 to 4 are skipped in all modes other than the CD function.
Steps 1 and 5 are skipped in the no CDM mode.

The aging operation ends when an error occurs.
Aging error display

"Load Error"	: Loading operation is not completed in four seconds.
"Eject Error"	: Eject operation is not completed in four seconds.
"Q TOC Err"	: The Q data could not be read during eight seconds. (During TOC read)
"Q SRCH Err"	: The Q data could not be read during eight seconds. (During track search)
"Q PLAY Err"	: The Q data could not be read during eight seconds. (During PLAY)
"FOK UP Err"	: Focus could not be locked in. (During setup)
"FOK TOC Err"	: Focus is un-locked many times. (During TOC read)
"FOK SRCH Err"	: Focus is un-locked many times. (During track search)
"FOK PLAY Err"	: Focus is un-locked several times. (During play)
"GFS UP Err"	: GFS error. (During setup)
"GFS TOC Err"	: GFS error. (During TOC read)
"GFS PLAY Err"	: GFS error. (During play)

Display selection during aging
The display can be switched by pressing the [TUNING–] and [FUNCTION] at the same time :


Example of display
Count display
" COUNT 723 "
(Machine has repeated for 723 times.)
Elapsed time display
" 12 : 05 : 35 "
(12 hours 5 minutes 35 seconds have elapsed.)
Other errors
" TW 2 SW 1 "
Normal display

** Other troubles
"TW*SW*"

TW : Numbers of times that the machine could not read TOC.
SW : Numbers of times that the machine could not complete the track search within 16 seconds.

To exit the aging mode and to return the TEST mode, press [TUNING –] and [VOL +] at the same time.

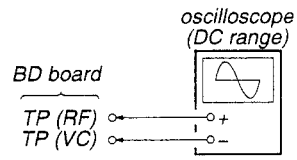
SECTION 4
ELECTRICAL ADJUSTMENTS

CD SECTION

Note:

1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. When optical pickup is replaced during repair, perform the focus bias adjustment.

Focus Bias Adjustment

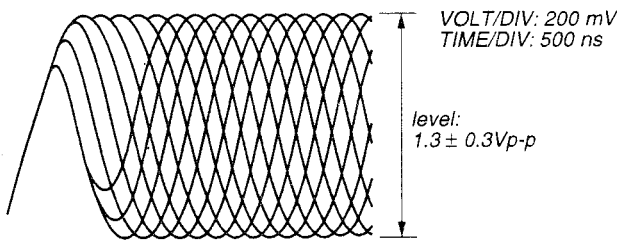


This adjustment is to be done when the optical block is replaced.

Adjustment procedure:

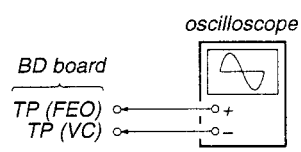
1. Connect oscilloscope to test point TP (VC) and TP (RF) on BD board.
2. Turned power switch ON. (Stop state)
3. Insert disc (YEDS-18) and press the ▶II button.
4. Adjust RV101 so that the oscilloscope waveform is as shown in the figure below (eye pattern).
   A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

• RF signal reference waveform (eye pattern)



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

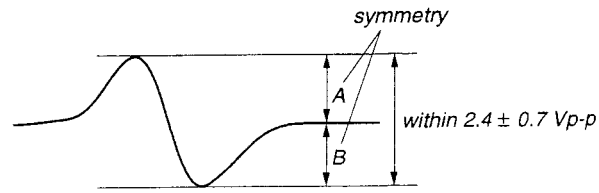
S-Curve Check



Procedure:

1. Connect as oscilloscope to test point TP (VC) and TP (FEO) on BD board.
2. Connect a lead wire between test point TP (FOK) and Ground.
3. Turned Power switch on.
4. Insert disc (YEDS-18) and turned Power switch on again to actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm that peak to peak level is within 2.4 ± 0.7 Vp-p.

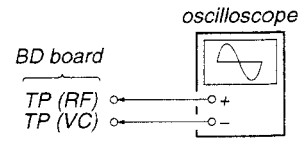
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note: • Try to measure several times to make sure that the ratio of A:B or B:A is more than 10:7.
• Select a longer sweep time and increase the brightness to obtain best waveform.

RF Level Check

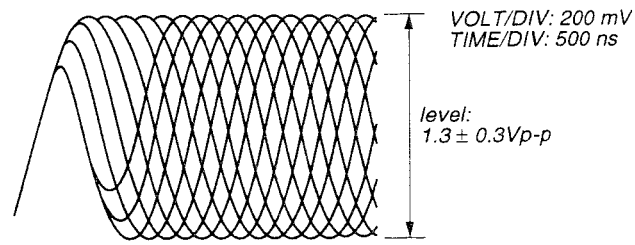


Procedure:

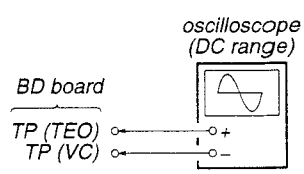
1. Connect oscilloscope to test point TP (VC) and TP (RF) on BD board.
2. Turned Power switch on.
3. Insert the disc (YEDS-18) and press the ▶II button.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct.

Note: Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform



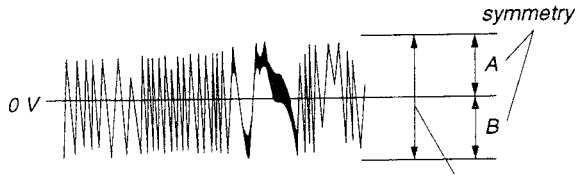
E-F Balance (Traverse) Check



Procedure:

1. Set up the TEST mode step 3) AF-ADJUSTMENT. (see page 9.)
2. Connect as oscilloscope to test point TP (TEO) on BD board.
3. Turned Power switch on.
4. Insert the disc (YEDS-18) in and press the ▶II button.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V dc, and check the amplitude.

Traverse waveform



amplitude: 300 ± 100 mVp-p

specified value: • $\frac{A-B}{2(A+B)} \times 100$ = less than ± 7%

• A+B = 300 ± 100 mVp-p

Focus/Tracking Gain Adjustment

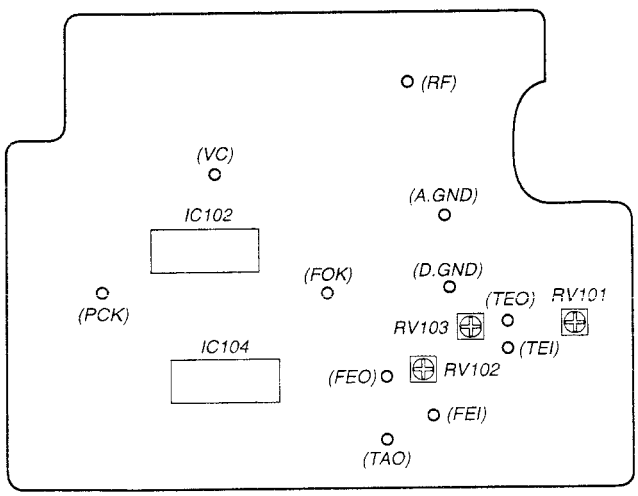
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, RV102 and RV103 adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

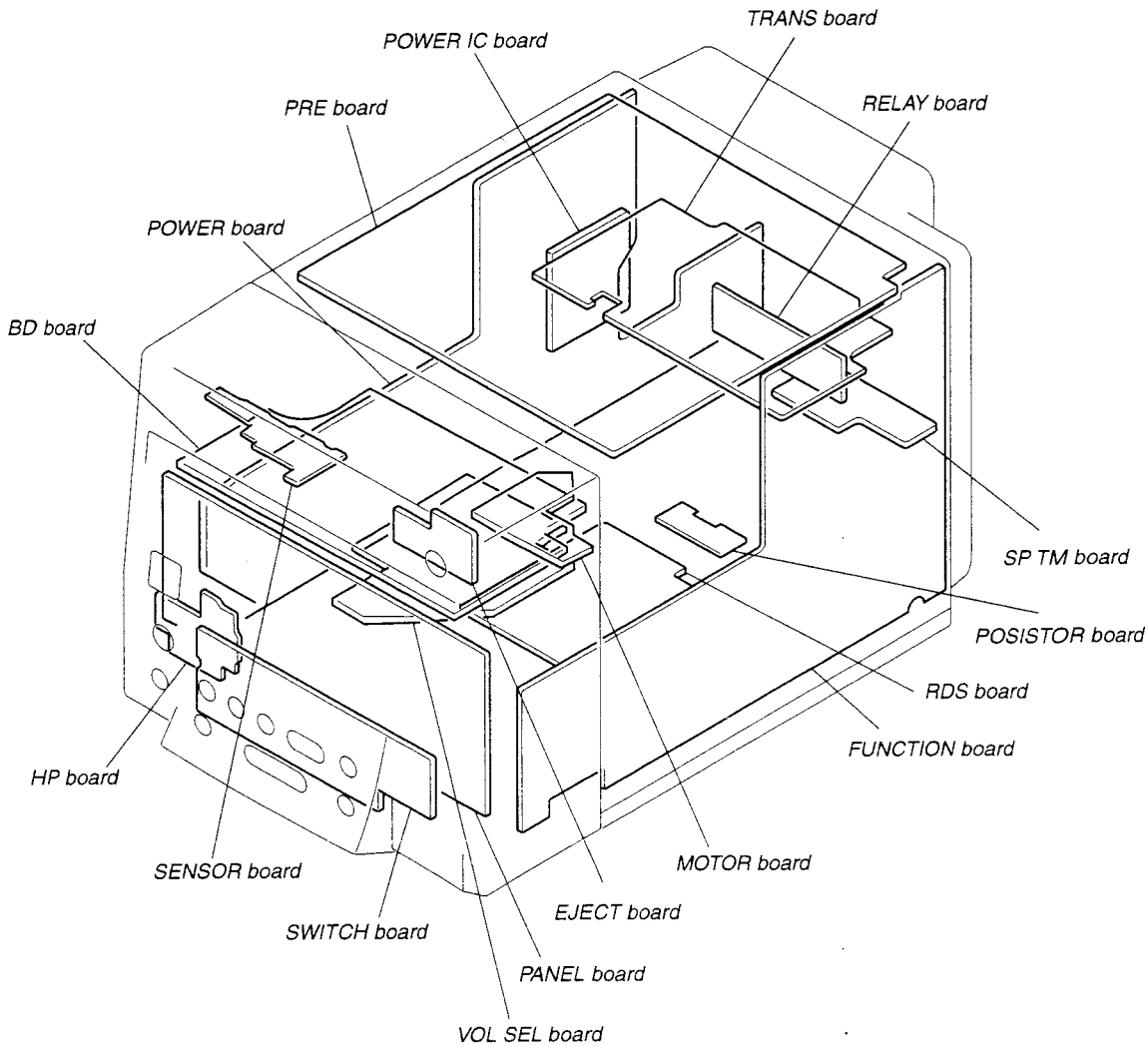
Adjustment Location:

[BD BOARD] — Component side —

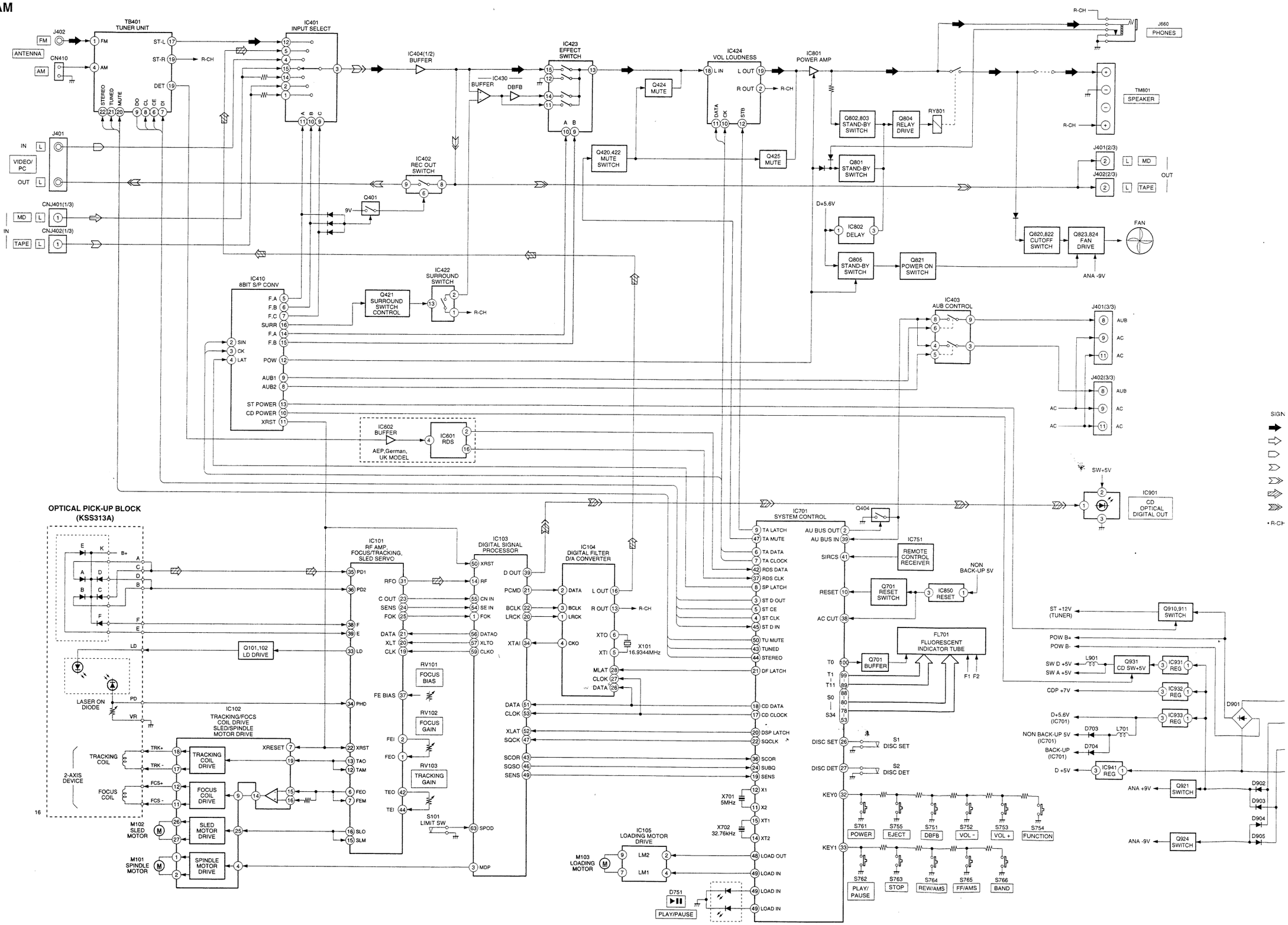


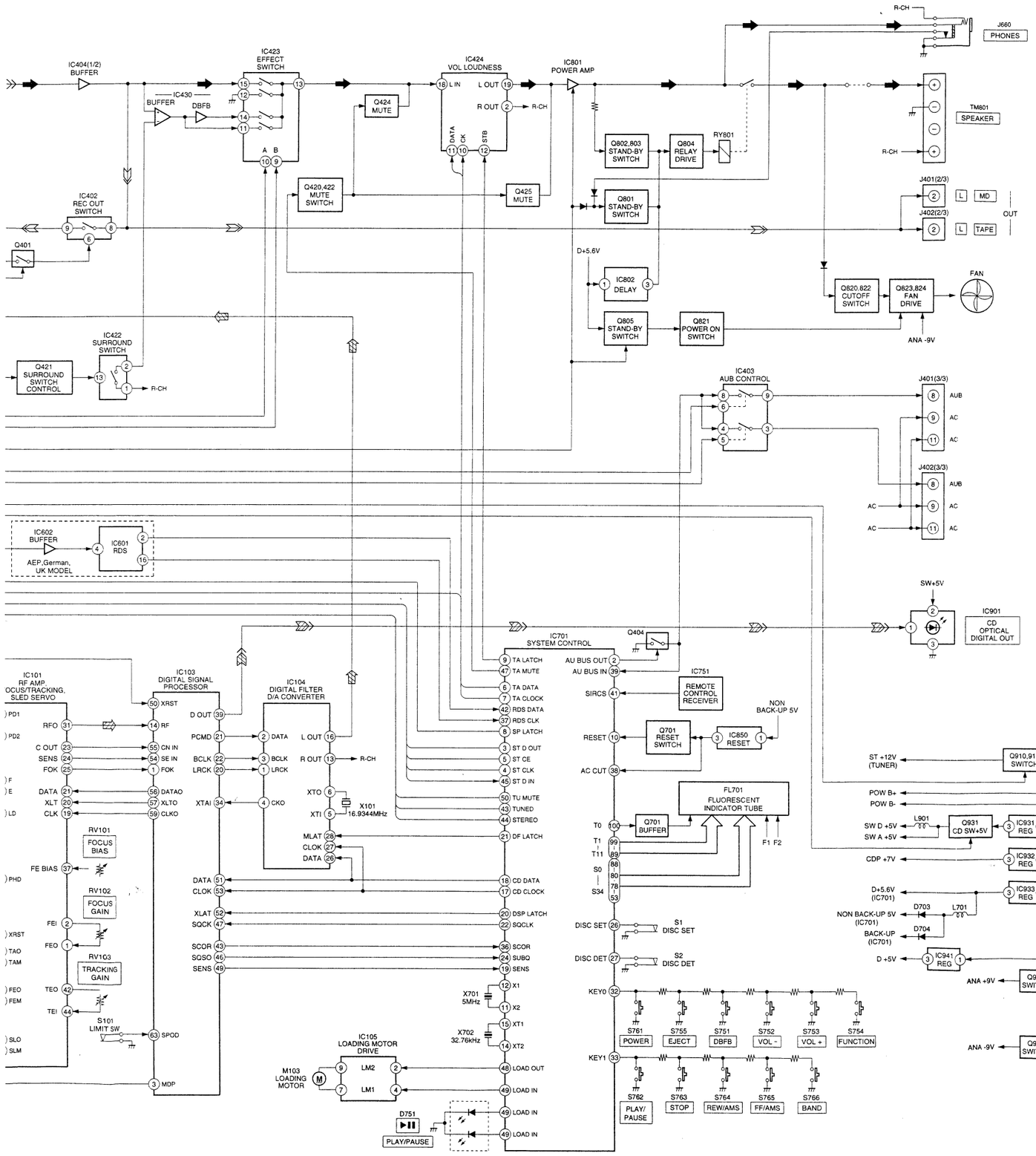
SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. BLOCK DIAGRAM

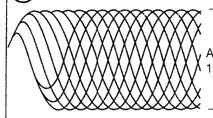



IC404(1/2) BUFFER
IC423 EFFECT SWITCH
IC430 BUFFER
DBFB
Q424 MUTE
IC424 VOL LOUDNESS
L IN
L OUT
R OUT
R-CH
DATA
CK
STB
IC801 POWER AMP
R-CH
J660 PHONES
TM801 SPEAKER
R-CH
Q802,803 STAND-BY SWITCH
Q804 RELAY DRIVE
RY801
IC402 REC OUT SWITCH
Q420,422 MUTE SWITCH
Q425 MUTE
Q801 STAND-BY SWITCH
J401(2/3)
J402(2/3)
L
MD
TAPE
OUT
Q401
D+5.6V
IC802 DELAY
Q820,822 CUTOFF SWITCH
Q823,824 FAN DRIVE
FAN
Q805 STAND-BY SWITCH
Q821 POWER ON SWITCH
ANA -9V
IC422 SURROUND SWITCH
Q421 SURROUND SWITCH CONTROL
R-CH
IC403 AUB CONTROL
J401(3/3)
J402(3/3)
AUB
AC
IC602 BUFFER
IC601 RDS
AEP,German, UK MODEL
SW+5V
IC901
CD OPTICAL DIGITAL OUT
IC701 SYSTEM CONTROL
Q404
IC751
REMOTE CONTROL RECEIVER
NON BACK-UP 5V
Q701 RESET SWITCH
IC850 RESET
FL701 FLUORESCENT INDICATOR TUBE
Q701 BUFFER
F1 F2
S1 DISC SET
S2 DISC SET
S761 POWER
S755 EJECT
S751 DBFB
S752 VOL -
S753 VOL +
S754 FUNCTION
S762 PLAY/ PAUSE
S763 STOP
S764 REW/AMS
S765 FF/AMS
S766 BAND
IC101 RF AMP. FOCUS/TRACKING, SLED SERVO
IC103 DIGITAL SIGNAL PROCESSOR
IC104 DIGITAL FILTER D/A CONVERTER
RV101 FOCUS BIAS
RV102 FOCUS GAIN
RV103 TRACKING GAIN
S101 LIMIT SW
X101 16.9344MHz
X701 5MHz
X702 32.76kHz
IC105 LOADING MOTOR DRIVE
M103 LOADING MOTOR
D751
PLAY/PAUSE
ST +12V (TUNER)
Q910,911 SWITCH
POW B+
POW B-
SW D +5V
SW A +5V
L901
Q931 CD SW+5V
IC931 REG
IC932 REG
IC933 REG
IC941 REG
CDP +7V
D+5.6V (IC701)
NON BACK-UP 5V (IC701)
BACK-UP (IC701)
D703
L701
D704
D +5V
ANA +9V
ANA -9V
Q921 SWITCH
Q924 SWITCH
D901
D902
D903
D904
D905
AC
T901
F1
F2
Malaysia, Singapore, Hong Kong, Tourist MODEL
S901
240V — 120V
AEP, UK, German MODEL
F901
AC IN
SIGNAL PATH
: FM
: MD
: VIDEO/PC
: TAPE
: REC
: CD
: DIGITAL OUT
• R-CH : Same as L-CH

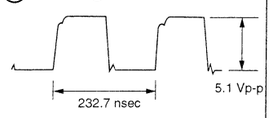
5-3. SCHEMATIC DIAGRAM — BD SECTION —

• **Waveform**

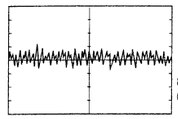
① IC101 ㉛ RFO



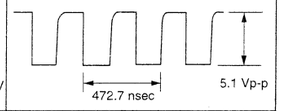
⑥ IC103 ㉕ XPCK



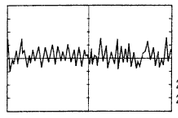
② IC101 ㊹ TEI



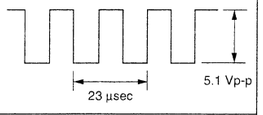
⑦ IC103 ㉒ BCLK



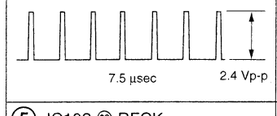
③ IC101 ② FEI



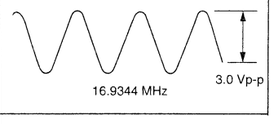
⑧ IC103 ⑳ LRCK



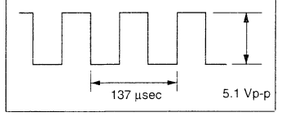
④ IC103 ③ MDP



⑨ IC104 ⑤ XTI



⑤ IC103 ㉘ RFCK



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : CD STOP
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇨ : DIGITAL OUT

【BD BOARD】

B POWER BOARD CN917 (Page 39)

CN107 2P

IC101 FOCUS/TRACKING SLED SERVO RF AMP IC101 CXA1782BQ

IC103 DIGITAL SIGNAL PROCESSOR IC103 CXD2507

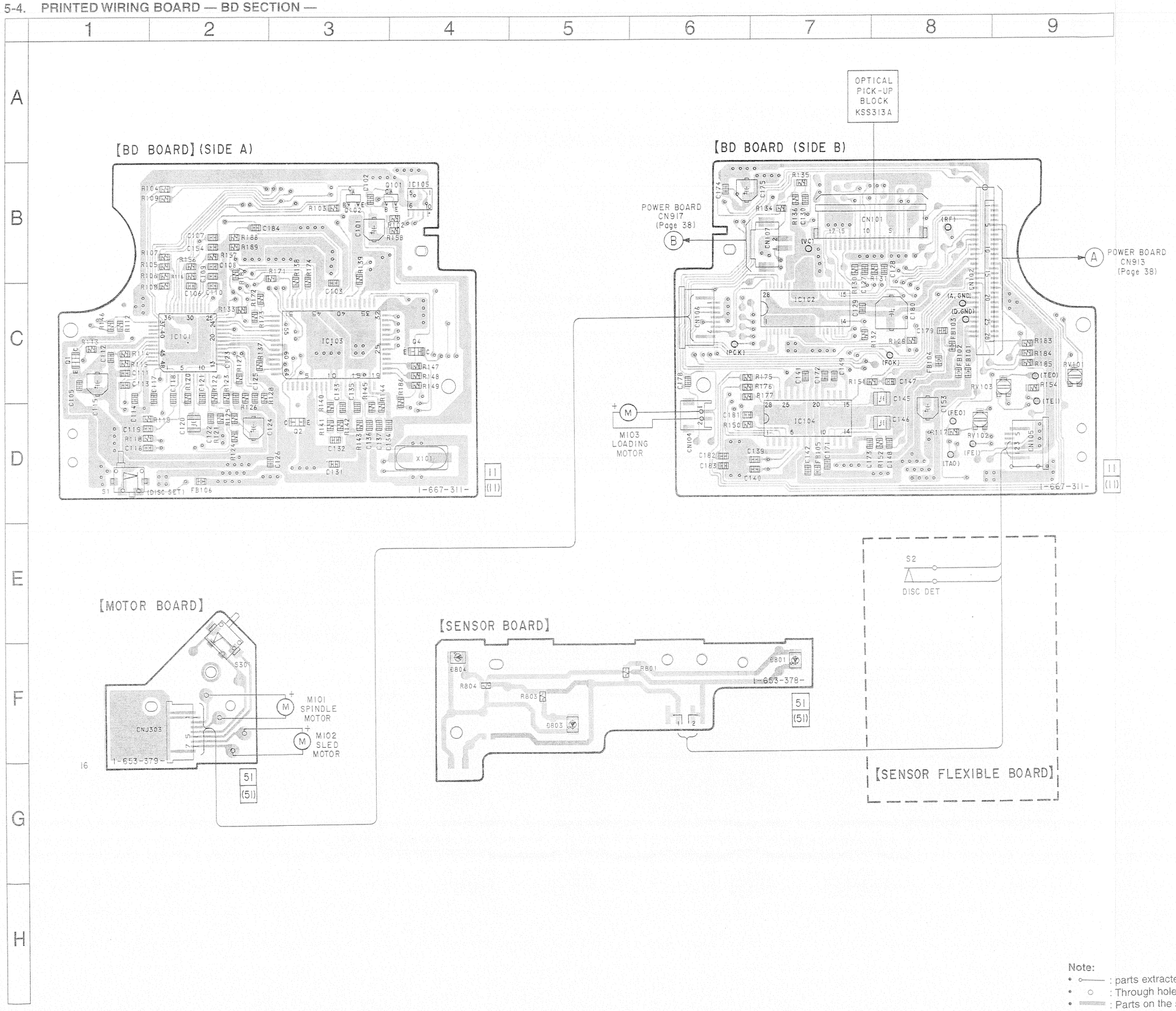
IC104 D/A CONVERTER DIGITAL FILTER ANALOG AMP

IC102 FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE IC102 BA6397FP

IC105 LOADING MOTOR DRIVER IC105 LB1638MTP-TI

A POWER BOARD CN913 (Page 39)

5-4. PRINTED WIRING BOARD — BD SECTION —



• Semiconductor Location

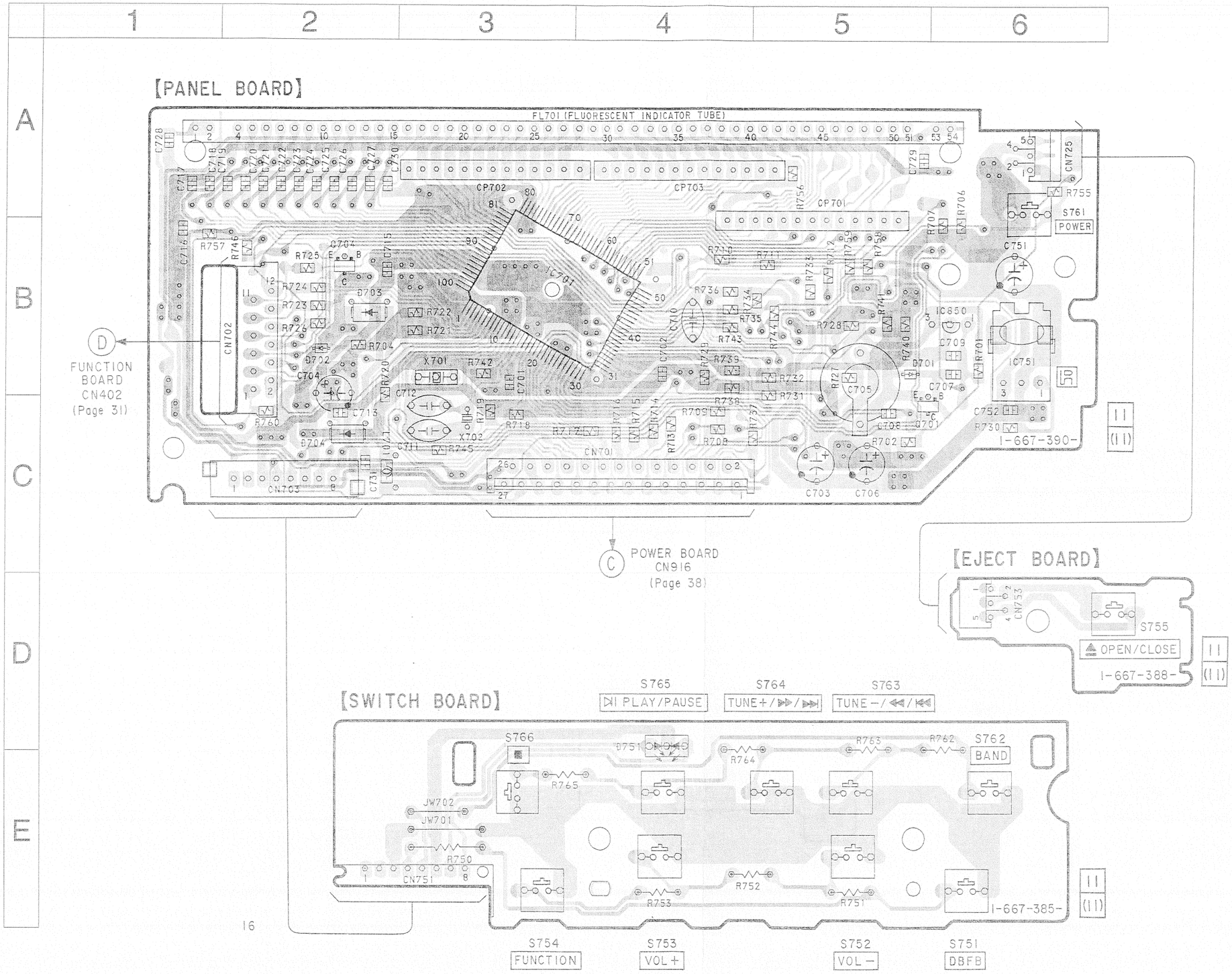
Ref. No.	Location
D801	F-7
D803	F-5
D804	F-4
IC101	C-2
IC102	C-7
IC103	C-3
IC104	D-7
IC105	B-4
Q1	C-1
Q2	D-3
Q4	C-4
Q101	B-4
Q102	B-3

Note:
- ○—— : parts extracted from the component side.
- ○ : Through hole.
- ▬▬ : Parts on the side wich is seen.

5-5. PRINTED WIRING BOARD — PANEL SECTION —

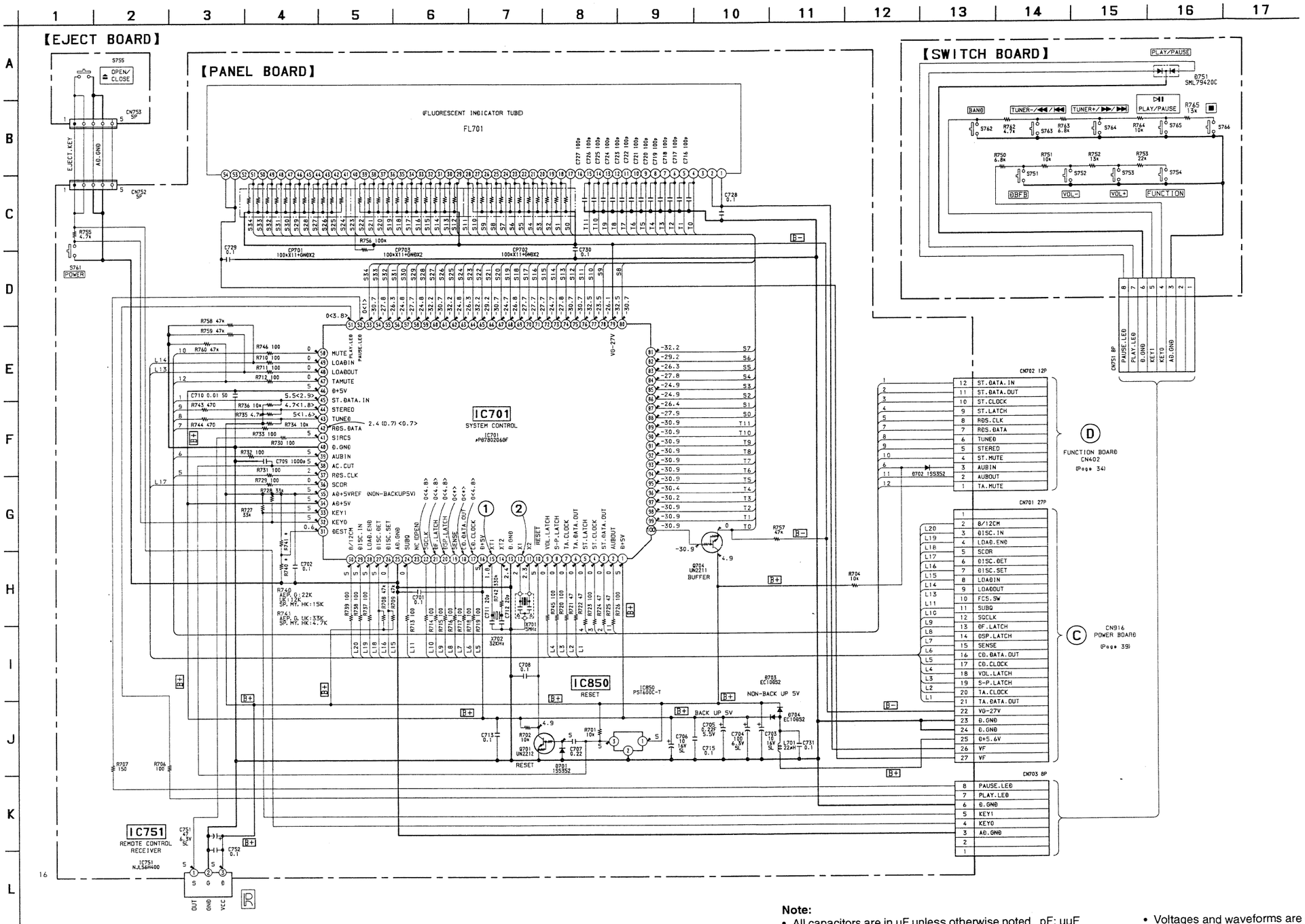
• Semiconductor Location

Ref. No.	Location
D701	B-5
D702	B-2
D703	B-2
D704	C-2
D751	D-4
IC701	B-3
IC751	B-6
IC850	B-6
Q701	C-6
Q704	B-2



Note:
- ○—— : parts extracted from the component side.
- ○ : Through hole.
- ▬▬ : Parts on the side wich is seen.
- ▬▬ : Pattern of the rear side.

5-6. SCHEMATIC DIAGRAM — PANEL SECTION —



• Waveform

① IC701 ⑮ XT1

② IC701 ⑫ X1

Note:

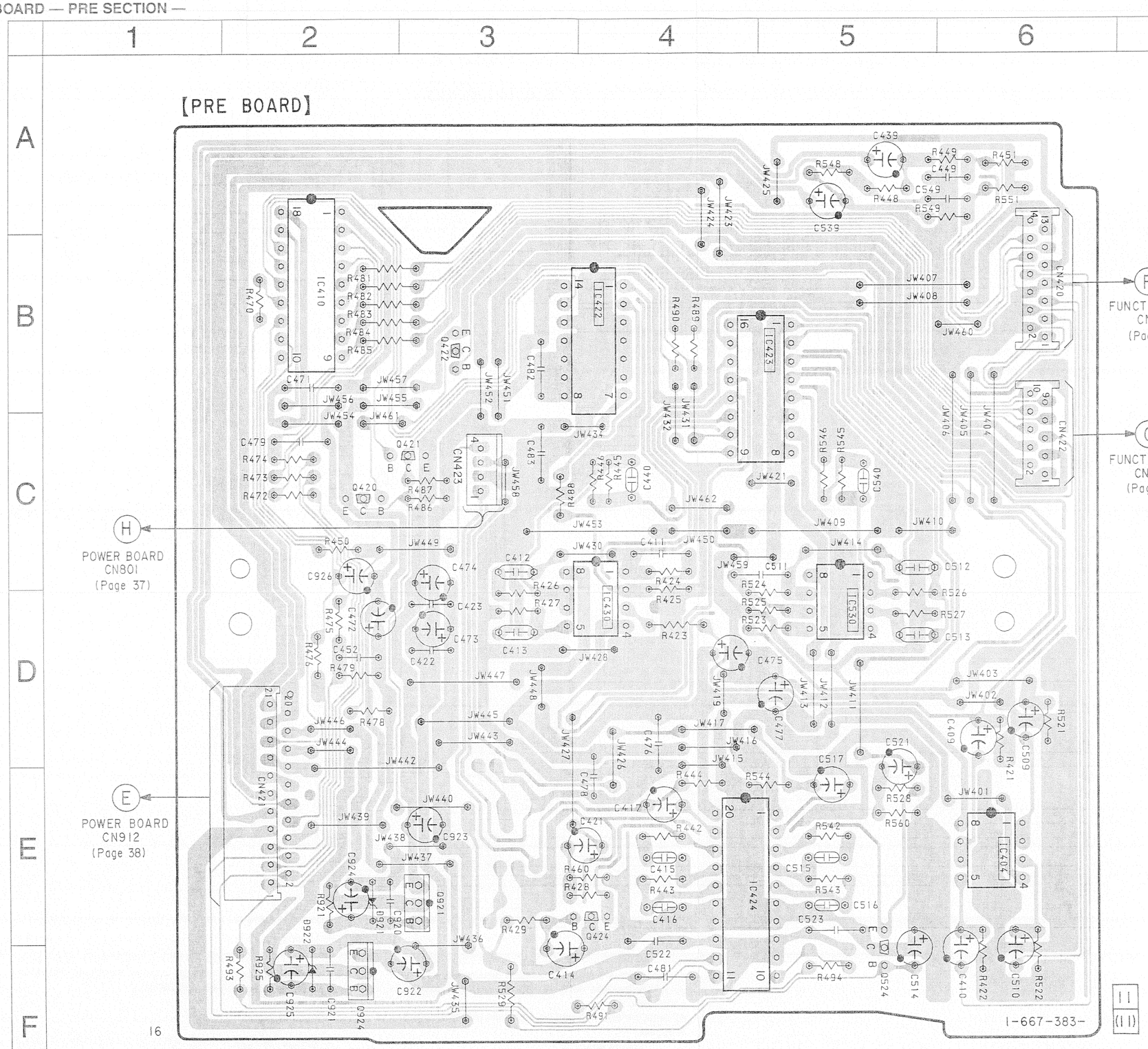
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- [ ] : panel designation.
- [B+] : B+ Line.
- [B–] ; B– Line.

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  < > : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

5-7. PRINTED WIRING BOARD — PRE SECTION —

• Semiconductor Location

Ref. No.	Location
D921	E-2
D922	F-2
IC404	E-6
IC410	B-2
IC422	B-4
IC423	B-5
IC424	E-4
IC430	D-4
IC530	D-5
Q420	C-2
Q421	C-3
Q422	B-3
Q424	E-4
Q524	F-5
Q921	E-3
Q924	F-2


【PRE BOARD】
1 2 3 4 5 6 7
A B C D E F
IC410
IC422
IC423
IC430
IC530
IC404
IC424
CN420
CN422
CN423
CN421
Q420
Q421
Q422
Q424
Q524
D921
D922
Q924
JW407
JW408
JW460
JW425
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JW457
JW456
JW455
JW454
JW461
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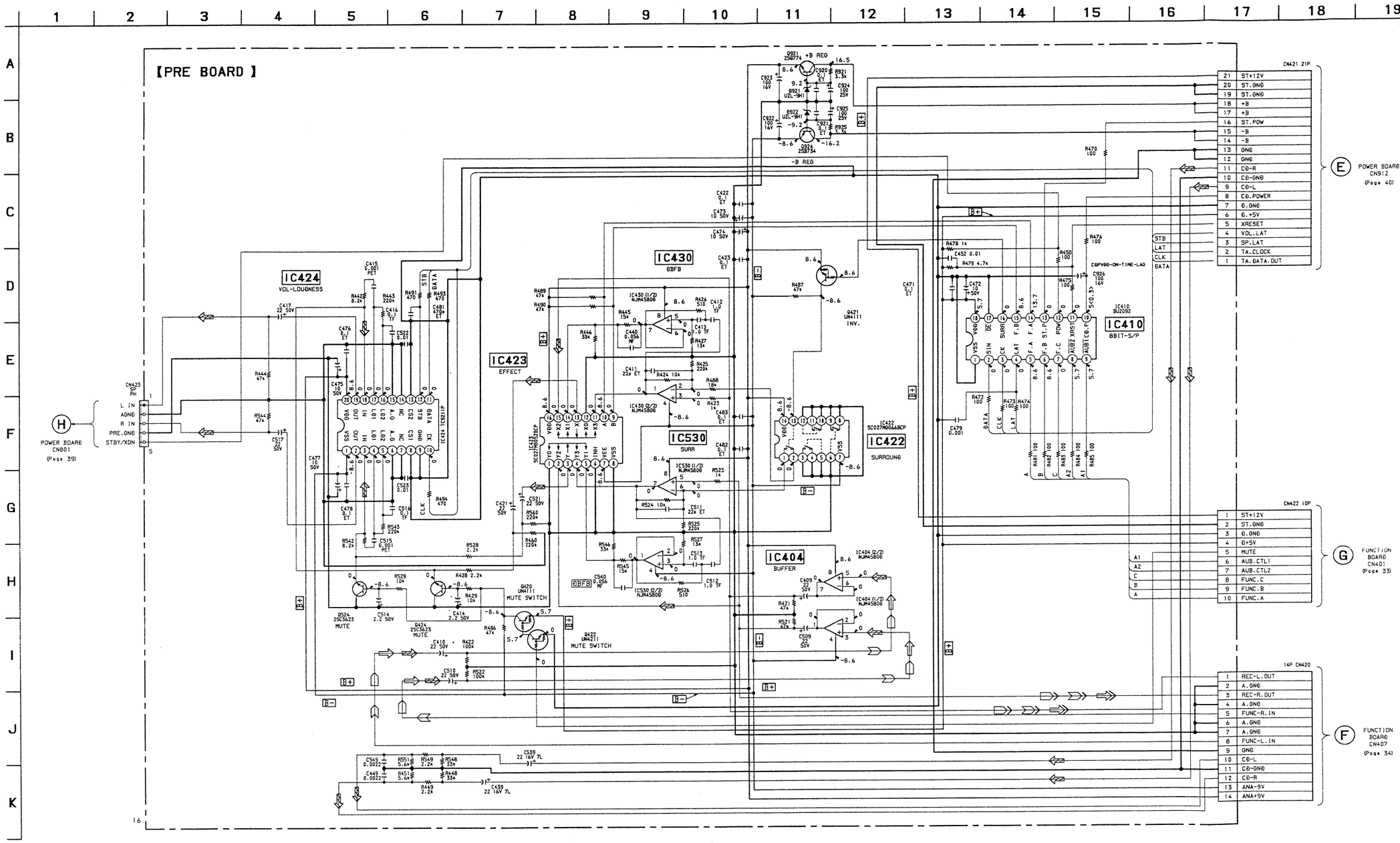
R40
R39
R38
R37
R36
R35
R34
R33
R32
R31
R30
R29
R28
R27
R26
R25
R24
R23
R22
R21
R20
R19
R18
R17
R16
R15
R14
R13
R12
R11
R10
R9
R8
R7
R6
R5
R4
R3
R2
R1
C439
C549
C539
C471
C482
C483
C479
C474
C423
C422
C412
C413
C473
C452
C472
C475
C476
C478
C477
C421
C415
C416
C522
C481
C414
C411
C512
C513
C511
C521
C517
C515
C516
C523
C514
C509
C510
C410
C409
C407
C408
C540
R548
R449
R451
R448
R549
R551
R481
R482
R483
R484
R485
R470
R490
R489
R546
R545
R544
R542
R543
R494
R491
R493
R450
R426
R427
R424
R425
R423
R524
R525
R523
R526
R527
R528
R560
R521
R522
R422
R421
R429
R460
R428
R443
R442

5-8. SCHEMATIC DIAGRAM — PRE SECTION —



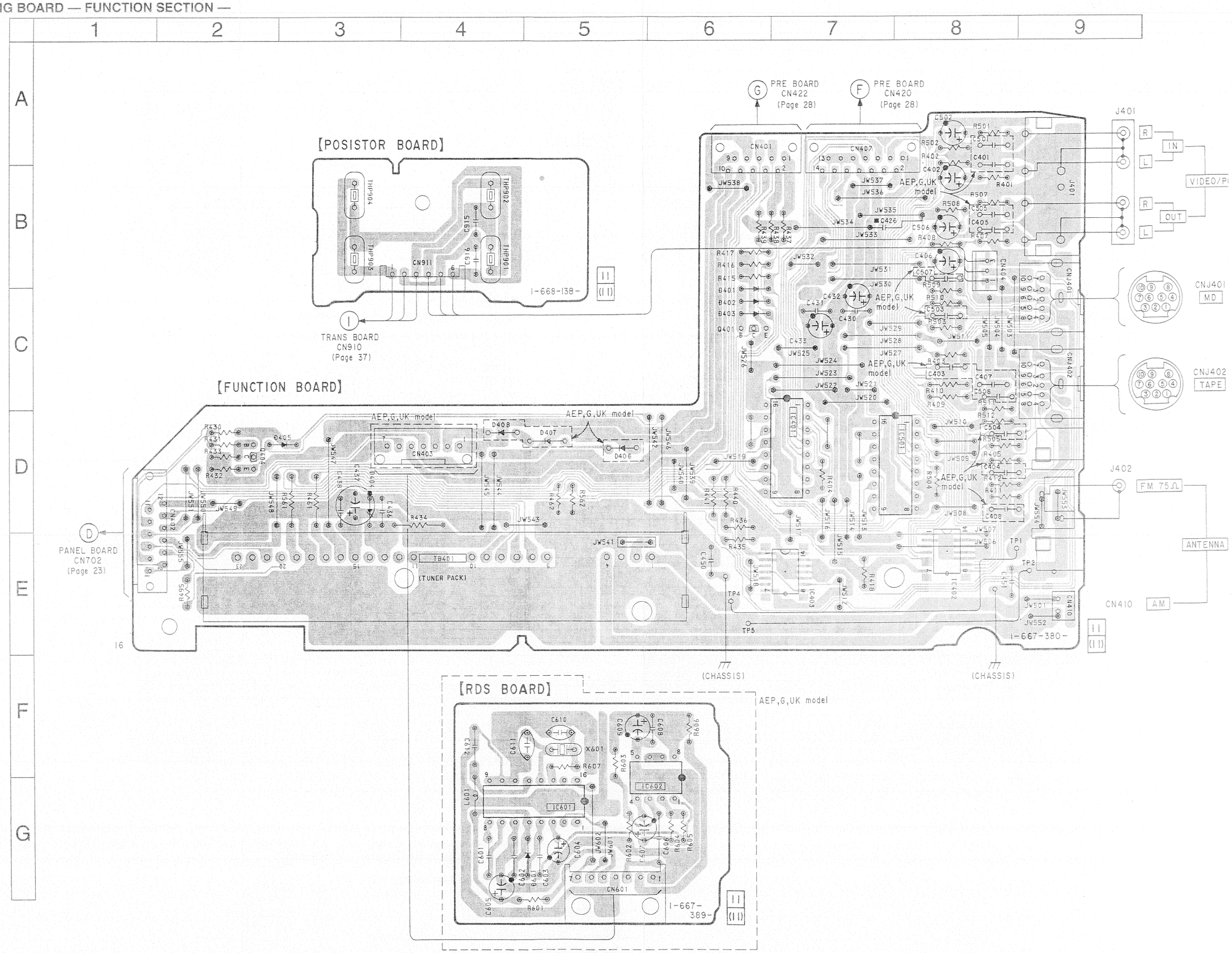
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line.
- B– : B–Line.
- Voltages is dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  < > : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - : MD PB
  - : MD REC
  - : TAPE PB
  - : VIDEO/PC PB
  - : TAPE REC
  - : VIDEO/PC REC
  - : CD

5-9. PRINTED WIRING BOARD — FUNCTION SECTION —

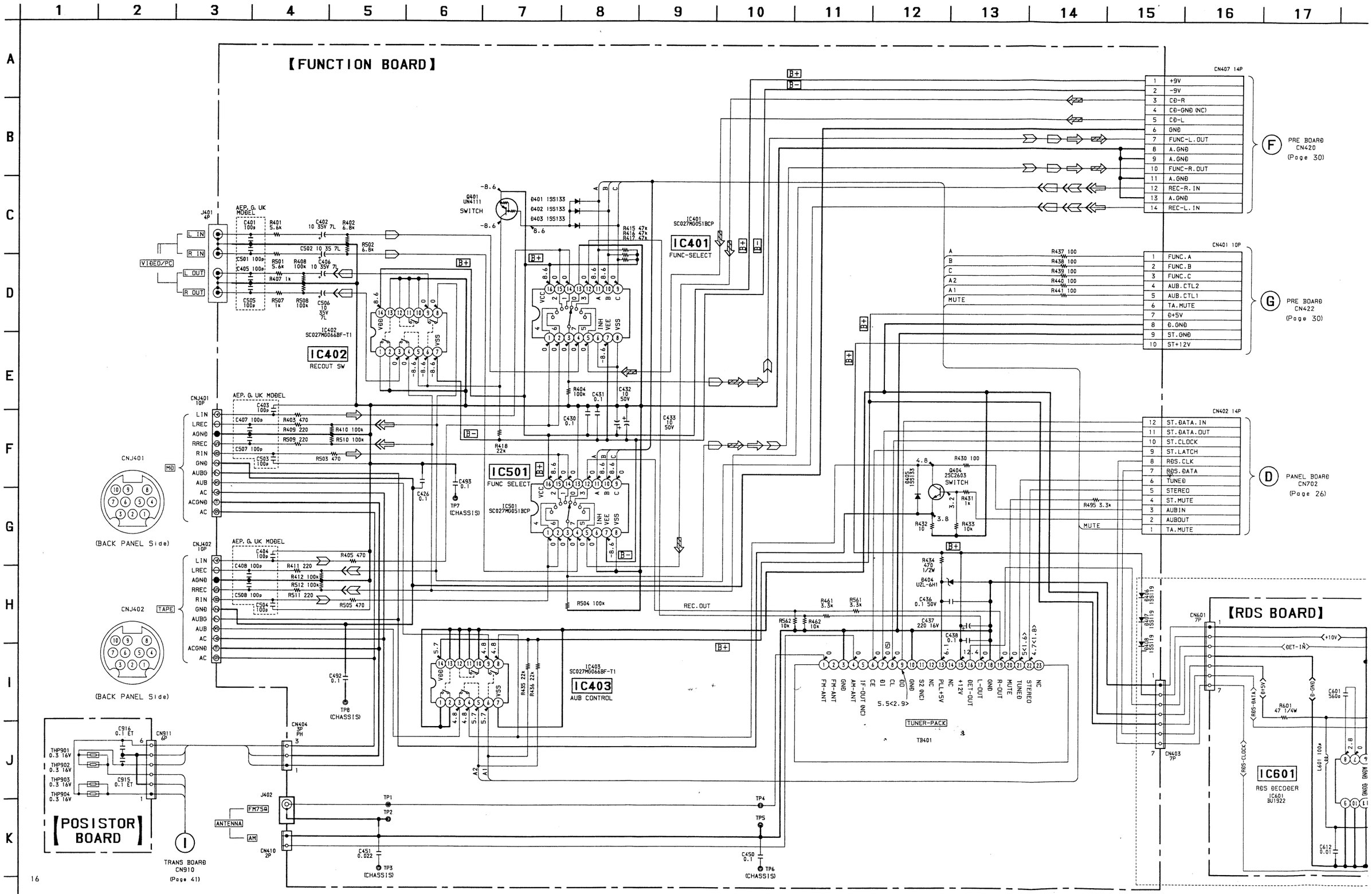
• Semiconductor Location

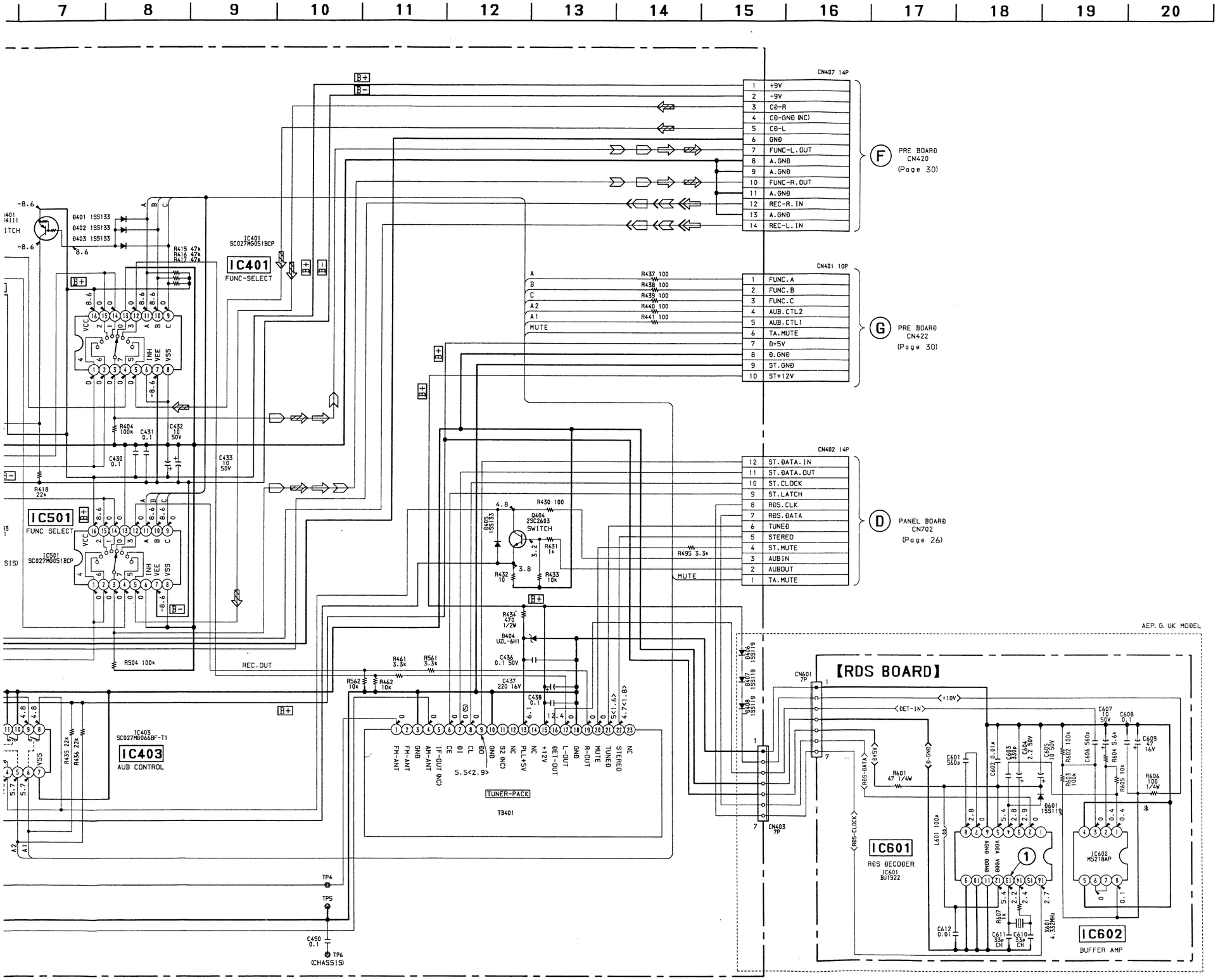
Ref. No.	Location
D401	C-6
D402	C-6
D403	C-6
D404	D-3
D405	D-3
D406	D-5
D407	D-5
D408	D-4
D601	G-5
IC401	D-7
IC402	E-8
IC403	E-7
IC501	D-8
IC601	G-5
IC602	G-6
Q401	C-6
Q404	D-2



Note:
- ○—— : parts extracted from the component side.
- ═══ : Parts on the side wich is seen.
- Abbreviation
  G : German

5-10. SCHEMATIC DIAGRAM — FUNCTION SECTION —





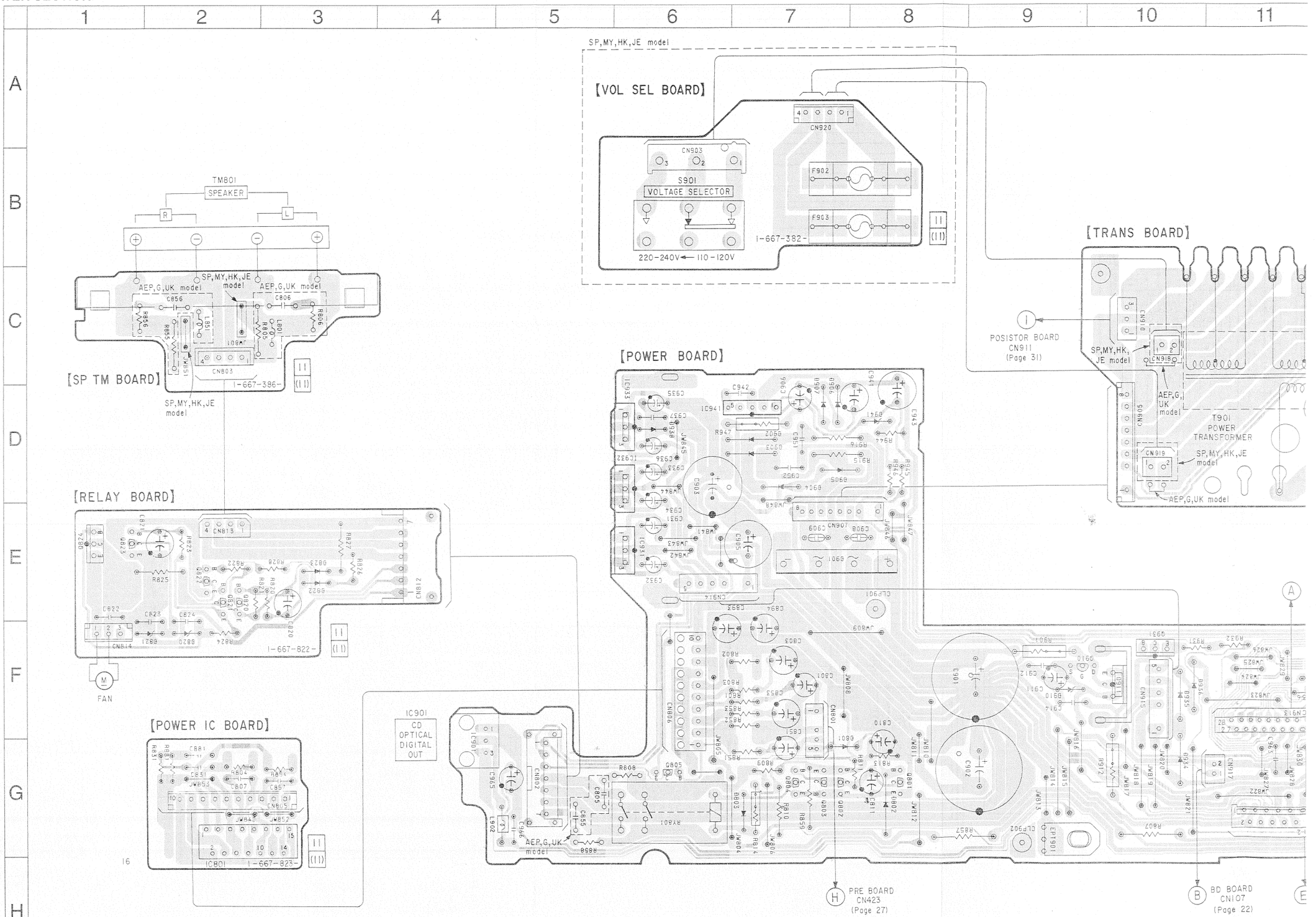
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B− Line.
- Voltages is dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  < > : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - ⇨ : MD PB
  - ⇨ : MD REC
  - ⇨ : TAPE PB
  - ⇨ : VIDEO/PC PB
  - ⇨ : TAPE REC
  - ⇨ : VIDEO/PC REC
  - ⇨ : CD
- Abbreviation
  G : German

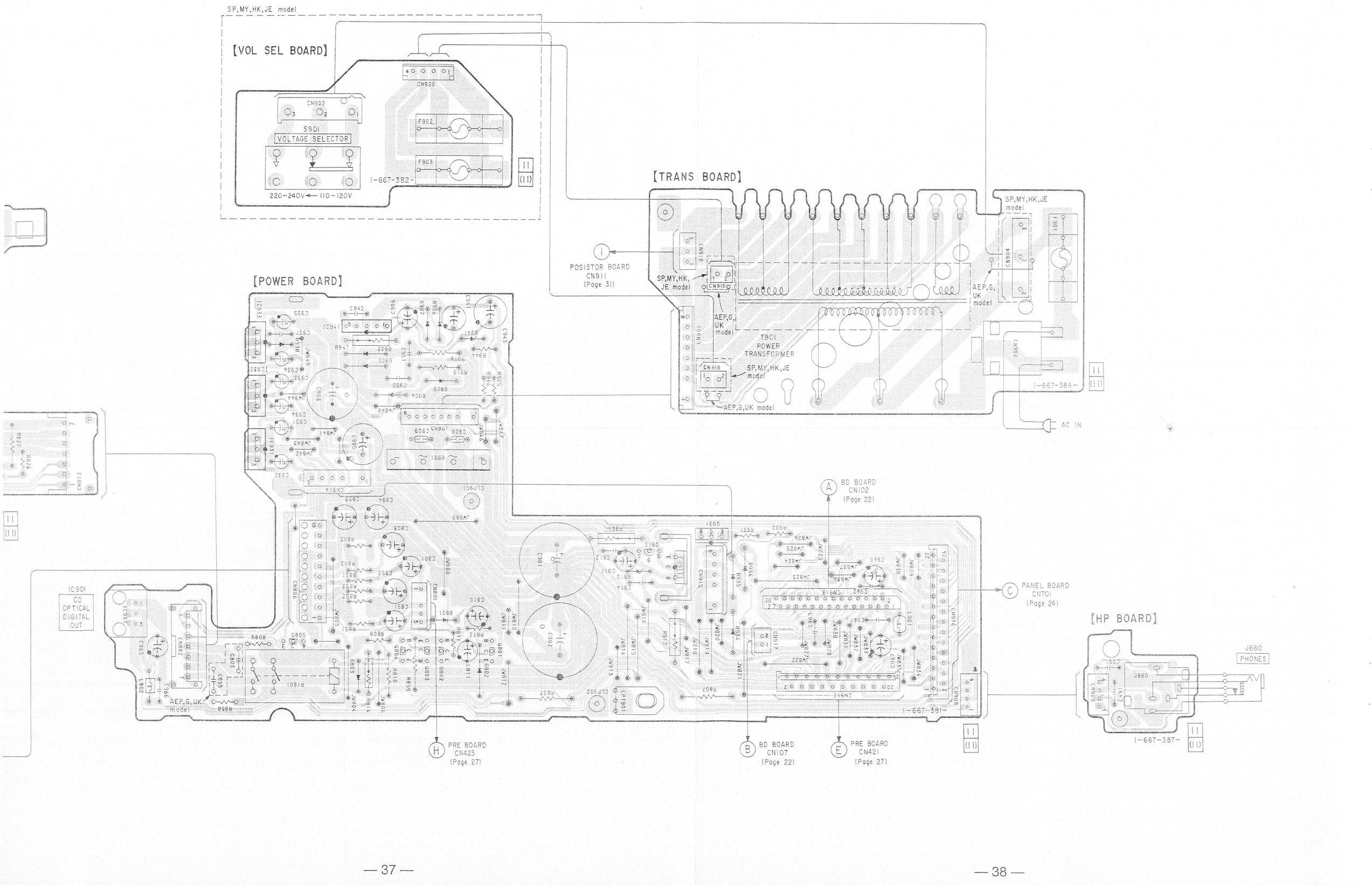
5-11. PRINTED WIRING BOARD — POWER SECTION —

• Semiconductor Location

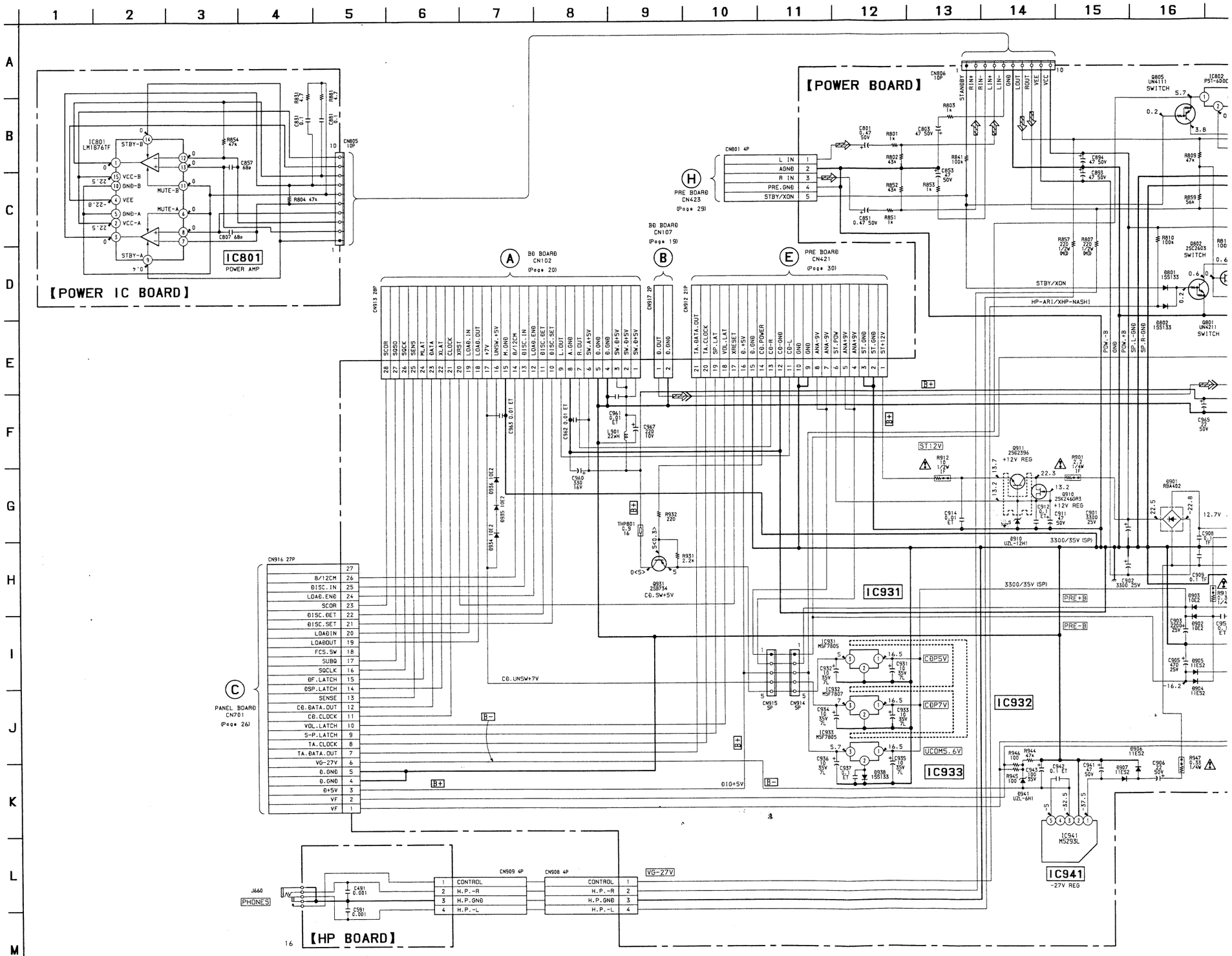
Ref. No.	Location
D801	G-7
D802	G-8
D803	G-7
D820	F-2
D821	F-2
D822	E-3
D823	E-3
D901	E-7
D902	D-7
D903	D-7
D904	D-7
D905	D-7
D906	D-7
D907	D-7
D910	F-9
D934	G-10
D935	F-10
D936	F-10
D938	D-6
D941	D-8
IC801	G-2
IC802	???
IC901	F-4
IC931	E-6
IC932	D-6
IC933	D-6
IC941	D-7
Q801	G-8
Q802	G-7
Q803	G-7
Q804	G-7
Q805	G-6
Q820	E-2
Q821	E-2
Q822	E-2
Q823	E-1
Q824	E-1
Q910	F-9
Q911	F-10
Q931	F-10



Note:
- ○—— : parts extracted from the component side.
- ▬▬ : Parts on the side wich is seen.
- Abbreviation
  - G : German
  - JE : Tourist
  - HK : Hong Kong
  - MY : Malaysia
  - SP : Singapore


SP,MY,HK,JE model
【VOL SEL BOARD】
CN920
CN903
S901
VOLTAGE SELECTOR
F902
F903
1-667-382-
220-240V ← 110-120V
【TRANS BOARD】
POSISTOR BOARD
CN911
(Page 31)
SP,MY,HK,
JE model
AEP,G,
UK
model
T901
POWER
TRANSFORMER
SP,MY,HK,JE
model
AEP,G,UK model
SP,MY,HK,JE
model
AEP,G,
UK
model
1-667-384-
AC IN
【POWER BOARD】
IC901
CD
OPTICAL
DIGITAL
OUT
AEP,G,UK
model
A BD BOARD
CN102
(Page 22)
C PANEL BOARD
CN701
(Page 24)
【HP BOARD】
J660
PHONES
1-667-381-
1-667-387-
H PRE BOARD
CN423
(Page 27)
B BD BOARD
CN107
(Page 22)
E PRE BOARD
CN421
(Page 27)

5-12. SCHEMATIC DIAGRAM — POWER SECTION —

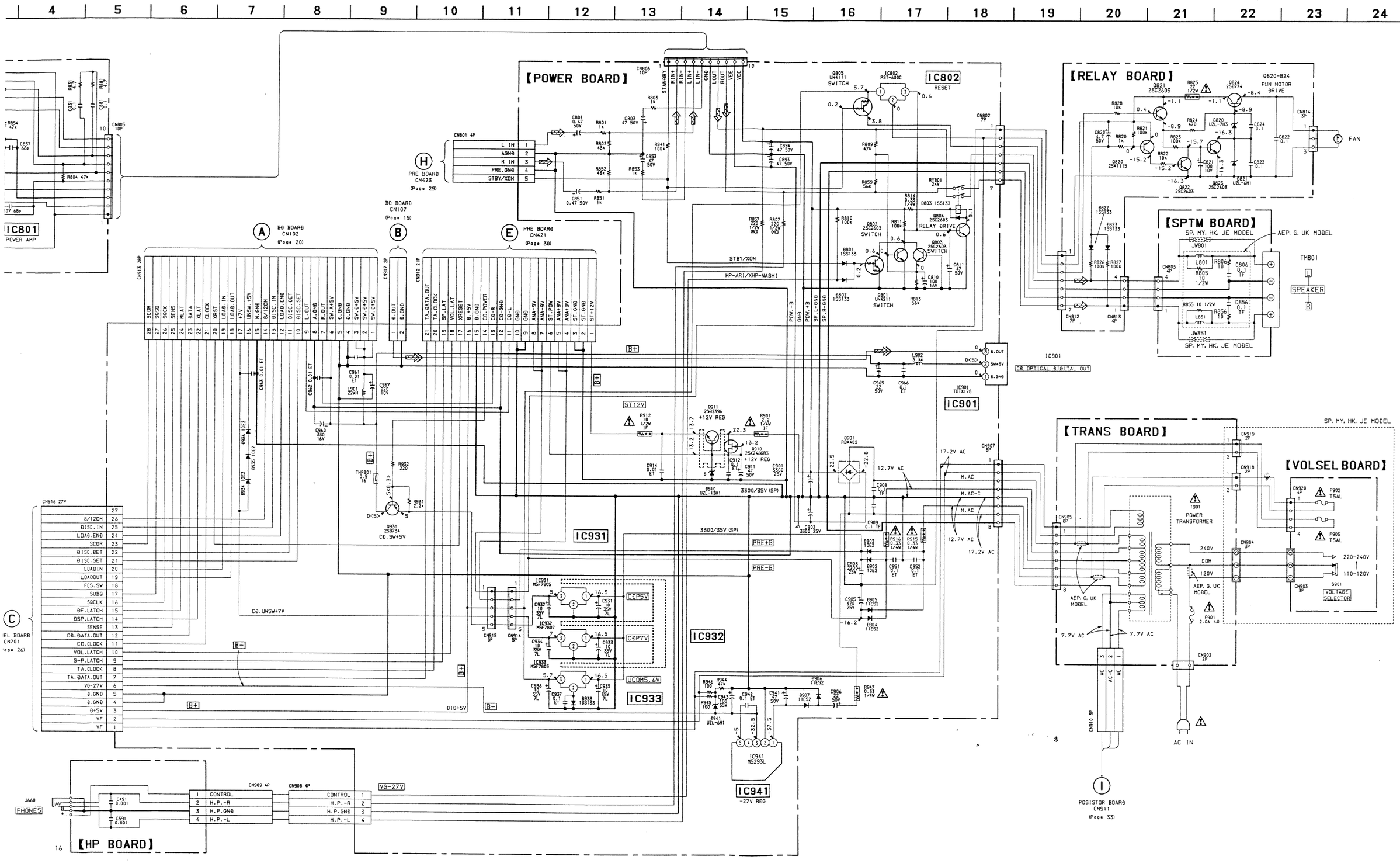


Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B– : B– Line.
- Voltages is dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  < > : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : CD
  : DIGITAL OUT
- Abbreviation
  G : German MY : Malaysia
  JE : Tourist SP : Singapore
  HK : Hong Kong


【POWER BOARD】
【RELAY BOARD】
【SPTM BOARD】
【TRANS BOARD】
【VOLSEL BOARD】
【HP BOARD】
IC801
POWER AMP
IC802
RESET
IC901
IC931
IC932
IC933
IC941
-27V REG
CN801 4P
L IN
AGND
R IN
PRE.GND
STBY/XON
PRE BOARD CN423
(Page 29)
B6 BOARD CN102
(Page 20)
B6 BOARD CN107
(Page 19)
PRE BOARD CN421
(Page 30)
CN915 28P
CN917 2P
CN912 21P
CN916 27P
EL BOARD CN701
(Page 26)
STBY/XON
HP-AR1/XHP-NASHI
CD.UNSW+7V
D1G+5V
ST12V
PRE+B
PRE-B
3300/35V (SP)
CDP5V
CDP7V
UCOM5.6V
CD OPTICAL DIGITAL OUT
FAN
SPEAKER
TM801
AEP, G, UK MODEL
SP, MY, HK, JE MODEL
POWER TRANSFORMER
VOLTAGE SELECTOR
AC IN
POSISTOR BOARD CN911
(Page 33)
PHONES
CN909 4P
CN908 4P
VG-27V
CONTROL
H.P.-R
H.P.GND
H.P.-L

5-13. IC PIN FUNCTION

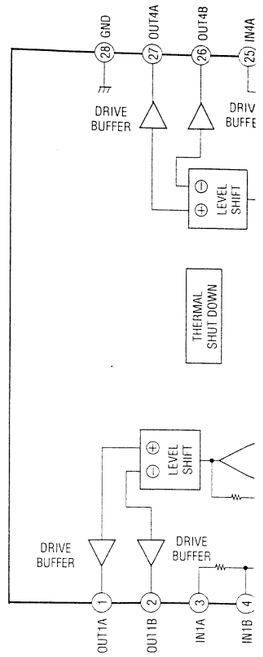
• IC701 μPD780206GF-023-3BA

Pin No.	Pin Name	I/O	Description
1	D+5V	—	Power supply (+5V)
2	AUB OUT	O	AU_BUS output
3	ST DATA OUT	O	Tuner pack (TB401) serial data output
4	ST CLOCK	O	Tuner pack (TB401) clock output
5	ST LATCH	O	Tuner pack (TB401) latch output
6	TA DATA OUT	O	Data output to electronic VOL (IC424) serial-to-parallel conversion IC (IC410)
7	TA CLOCK	O	Clock output to electronic VOL (IC424) serial-to-parallel conversion IC (IC410)
8	LATCH (S.P)	O	Latch output to serial-to-parallel conversion IC (IC410)
9	LATCH (VOL)	O	Latch output to electronic VOL (IC424)
10	$\overline{\text{RESET}}$	I	SYSTEM RESET
11	X2	O	Main clock oscillator output (5MHz)
12	X1	I	Main clock oscillator input (5MHz)
13	D.GND	—	Connected to Vss
14	XT2	O	Watch oscillator output (32.768 kHz)
15	XT1	I	Watch oscillator input (32.768 kHz)
16	D+5V	—	Positive power supply (+5V)
17	CD CLOCK	O	CD clock output
18	CD DATA	O	CD data output
19	SENSE	I	CD DSP sense input
20	DSP LATCH	O	CD DSP latch output
21	DF LATCH	O	CD D/A latch output
22	SQCLK	O	CD Sub Q clock output
23	(OPEN)	—	(Not used)
24	SUBQ	I	Sub Q data input
25	AD.GND	—	Ground
26	DISC SET	I	CDM chucking sensor
27	DISC DET	I	CDM disc sensor
28	LOAD END	I	CDM disc sensor
29	DISC IN	I	CDM disc sensor
30	DISC 8/12	I	CDM disc sensor
31	DEST	I	Identification input of destination
32	KEY0	I	Key input
33	KEY 1	I	Key input
34	AD+5V	—	Built-in A/D converter analog power supply (+5V)
35	AD+5V REF	—	Built-in A/D converter reference voltage input (+5V)
36	SCOR	I	DSP SCOR input
37	RDS.CLOCK	I	DSP clock input
38	AC.CUT	I	AC power off detection
39	AUB IN	I	AU_BUS input
40	D.GND	—	Ground
41	SIRCS	I	SIRCS remote control input
42	RDS.DATA	—	(Not used)
43	TUNED	I	Tuner pack (TB401) TUNED input
44	STEREO	I	Tuner pack (TB401) STEREO input
45	ST DATA	I	Tuner pack (TB401) DATA input
46	D+5V	—	Positive power supply (+5V)
47	TA.MUTE	O	TA mute output
48	LOAD OUT	O	CDM 50 load output
49	LOAD IN	O	CDM 50 load input
50	ST.MUTE	O	Tuner pack (TB401) mute output

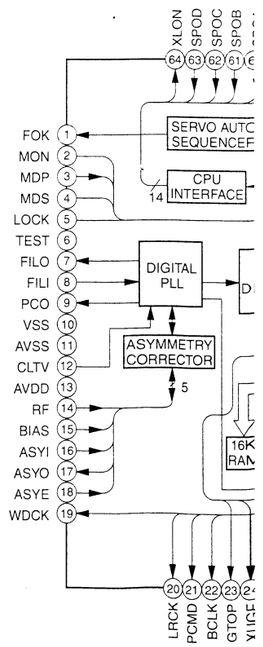
Pin No.	Pin Name	I/O	Description
51	PLAY LED	O	CD PLAY LED output
52	PAUSE LED	O	CD PAUSE LED output
53	S34	O	FL tube segment output
54	S33	O	
55	S32	O	
56	S31	O	
57	S30	O	
58	S29	O	
59	S28	O	
60	S27	O	
61	S26	O	
62	S25	O	
63	S24	O	
64	S23	O	
65	S22	O	
66	S21	O	
67	S20	O	
68	S19	O	
69	S18	O	
70	S17	O	
71	S16	O	
72	S15	O	
73	S14	O	
74	S13	O	
75	S12	O	
76	S11	O	
77	S10	O	
78	S9	O	
79	VG–27V	—	FIP controller pull-down resistor is connected here (–27V)
80	S8	O	FL tube segment output
81	S7	O	
82	S6	O	
83	S5	O	
84	S4	O	
85	S3	O	
86	S2	O	
87	S1	O	
88	S0	O	
89	T11	O	FL tube grid output
90	T10	O	
91	T9	O	
92	T8	O	
93	T7	O	
94	T6	O	
95	T5	O	
96	T4	O	
97	T3	O	
98	T2	O	
99	T1	O	
100	T0	O	

5-14. IC BLOCK DIAGRA

IC 102 BA6397FP



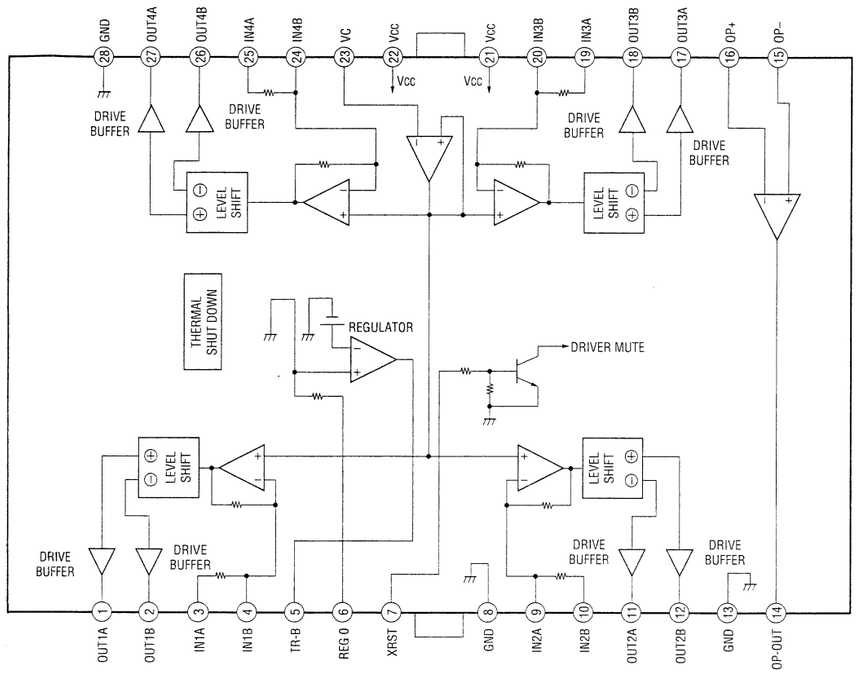
IC103 CXD2507AQ



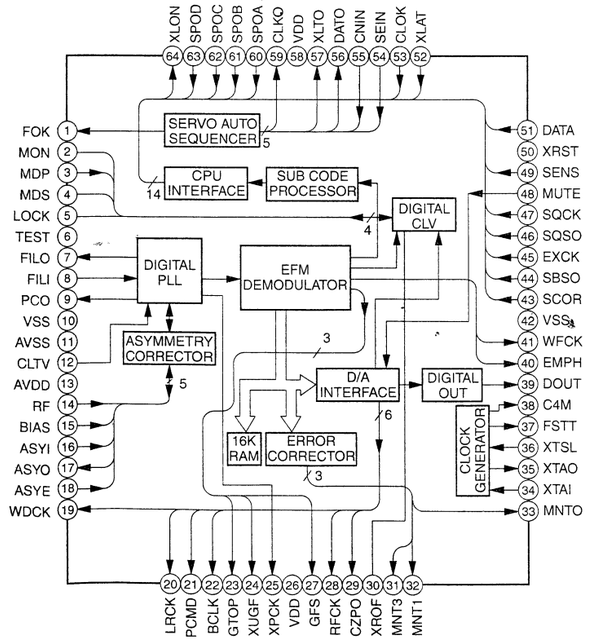
Pin No.	Pin Name	I/O	Description
51	PLAY LED	O	CD PLAY LED output
52	PAUSE LED	O	CD PAUSE LED output
53	S34	O	FL tube segment output
54	S33	O	
55	S32	O	
56	S31	O	
57	S30	O	
58	S29	O	
59	S28	O	
60	S27	O	
61	S26	O	
62	S25	O	
63	S24	O	
64	S23	O	
65	S22	O	
66	S21	O	
67	S20	O	
68	S19	O	
69	S18	O	
70	S17	O	
71	S16	O	
72	S15	O	
73	S14	O	
74	S13	O	
75	S12	O	
76	S11	O	
77	S10	O	
78	S9	O	
79	VG–27V	—	FIP controller pull-down resistor is connected here (–27V)
80	S8	O	FL tube segment output
81	S7	O	
82	S6	O	
83	S5	O	
84	S4	O	
85	S3	O	
86	S2	O	
87	S1	O	
88	S0	O	
89	T11	O	FL tube grid output
90	T10	O	
91	T9	O	
92	T8	O	
93	T7	O	
94	T6	O	
95	T5	O	
96	T4	O	
97	T3	O	
98	T2	O	
99	T1	O	
100	T0	O	

5-14. IC BLOCK DIAGRAMS

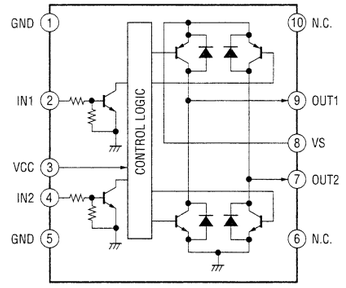
IC 102 BA6397FP



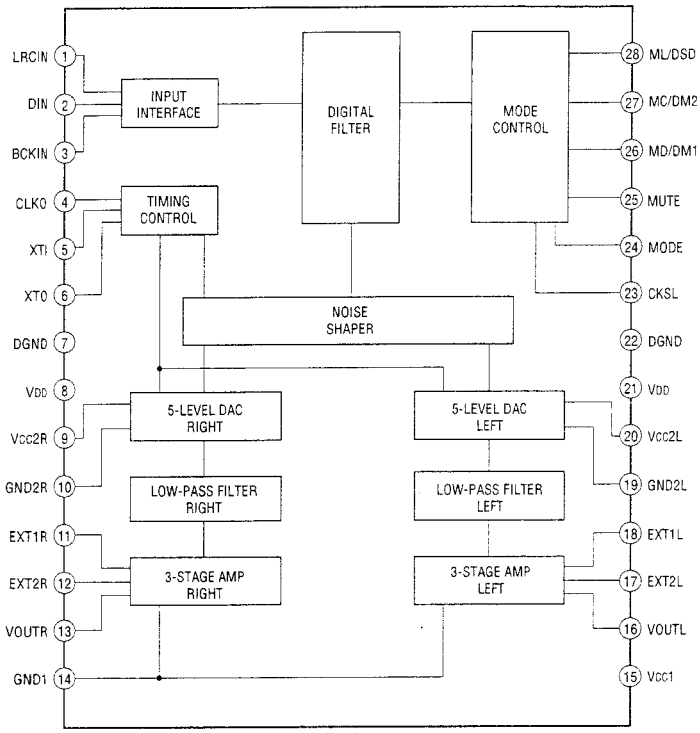
IC103 CXD2507AQ



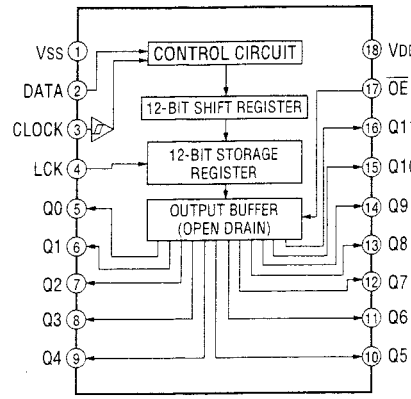
IC105 LB1638M



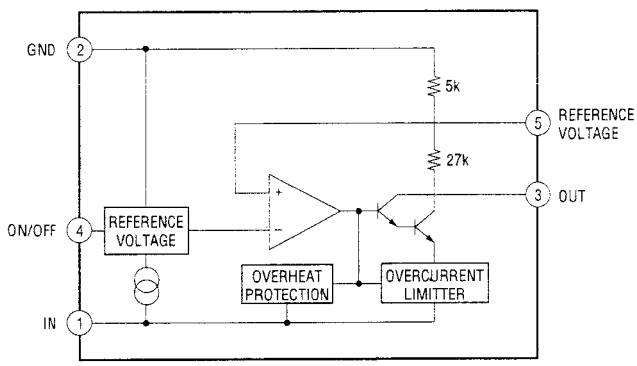
IC104 PCM1710U-B



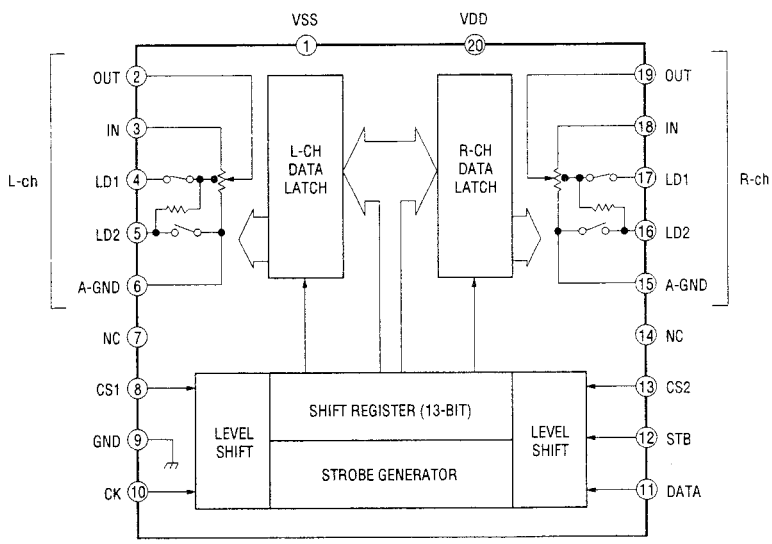
IC410 BU2092



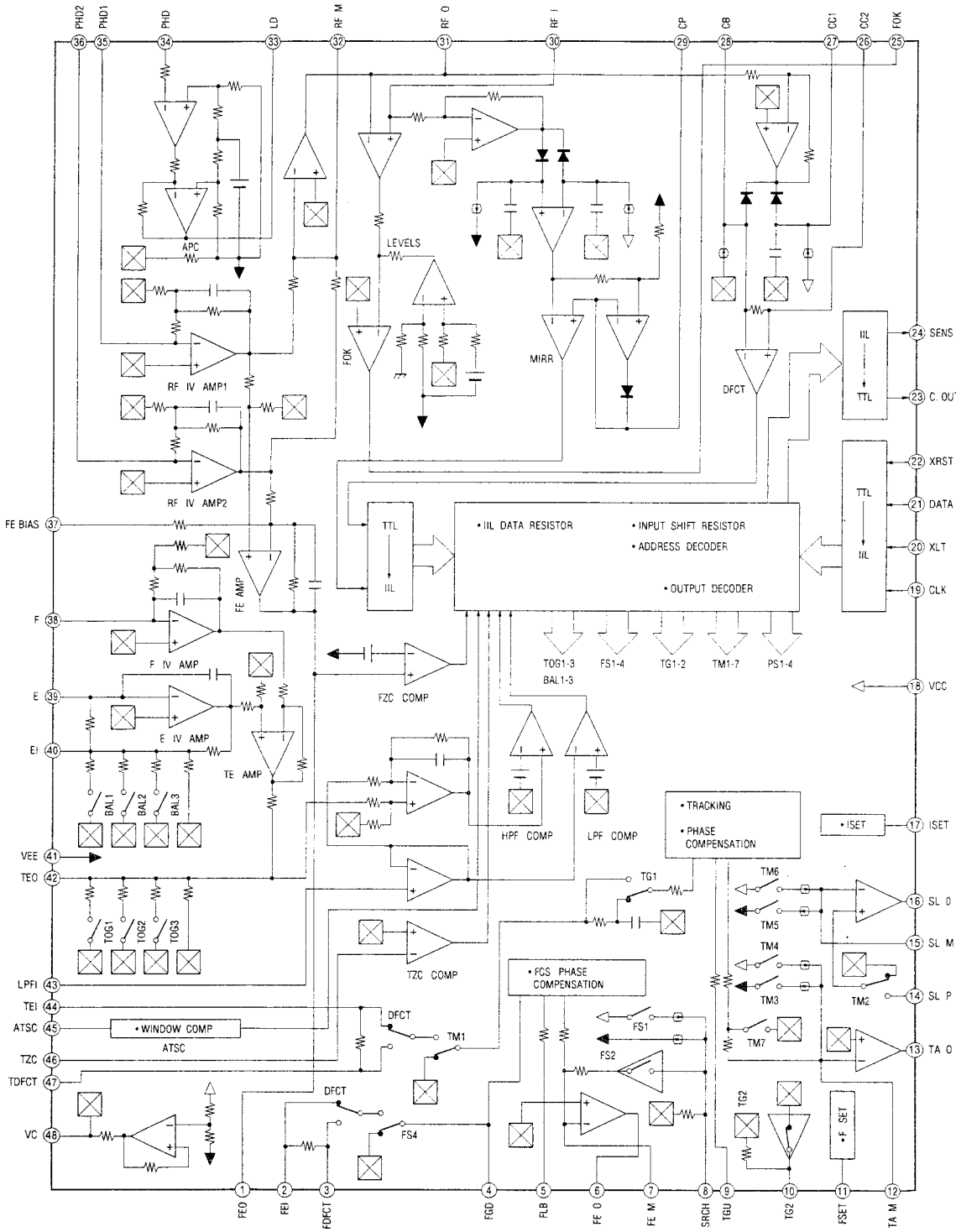
IC941 M5293L



IC424 TC9211P



IC101 CXA1782BQ

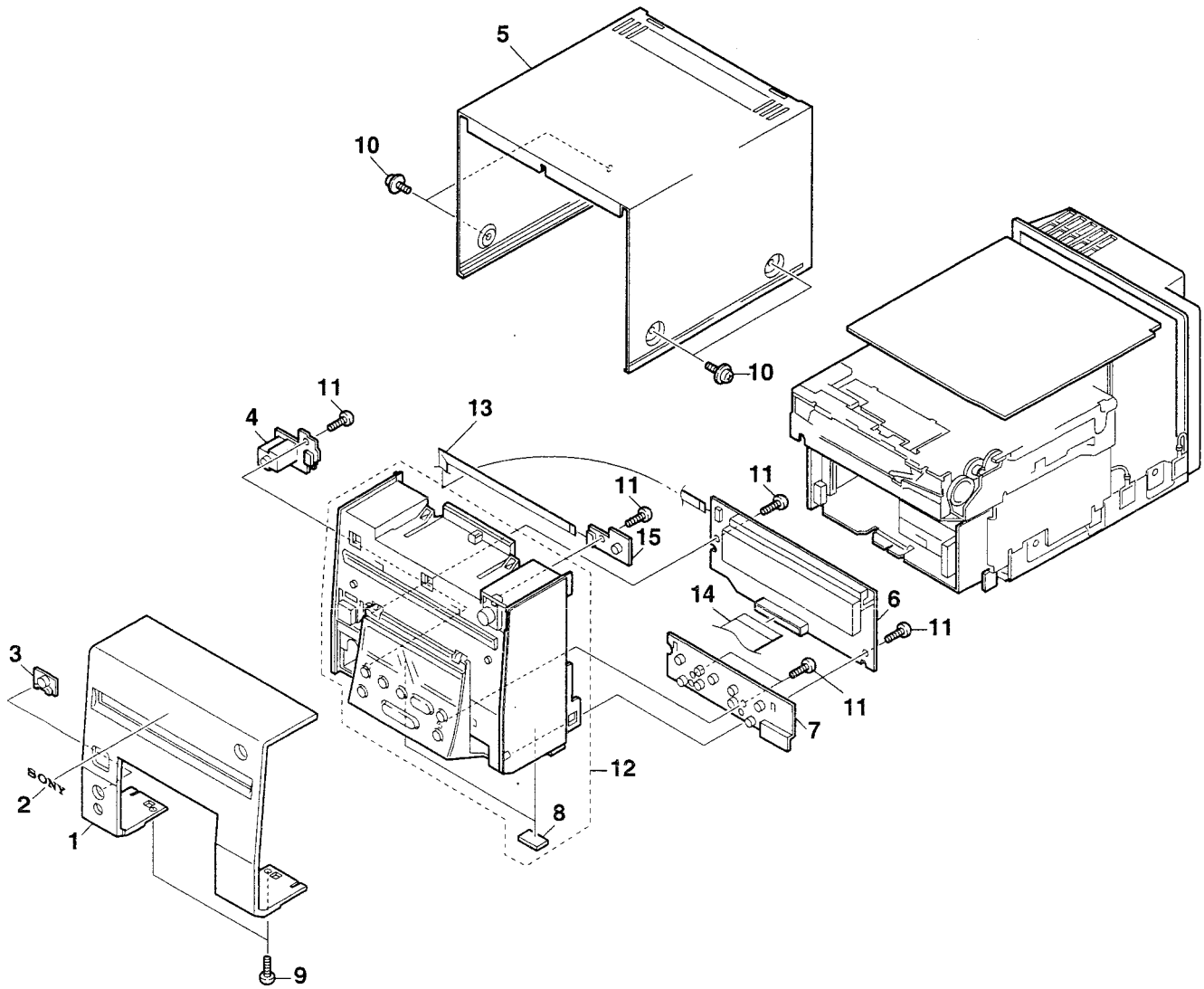


SECTION 6
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- Abbreviation
  SP : Singapore
  MY : Malaysia
  HK : Hong Kong
  G : German
  JE : Tourist

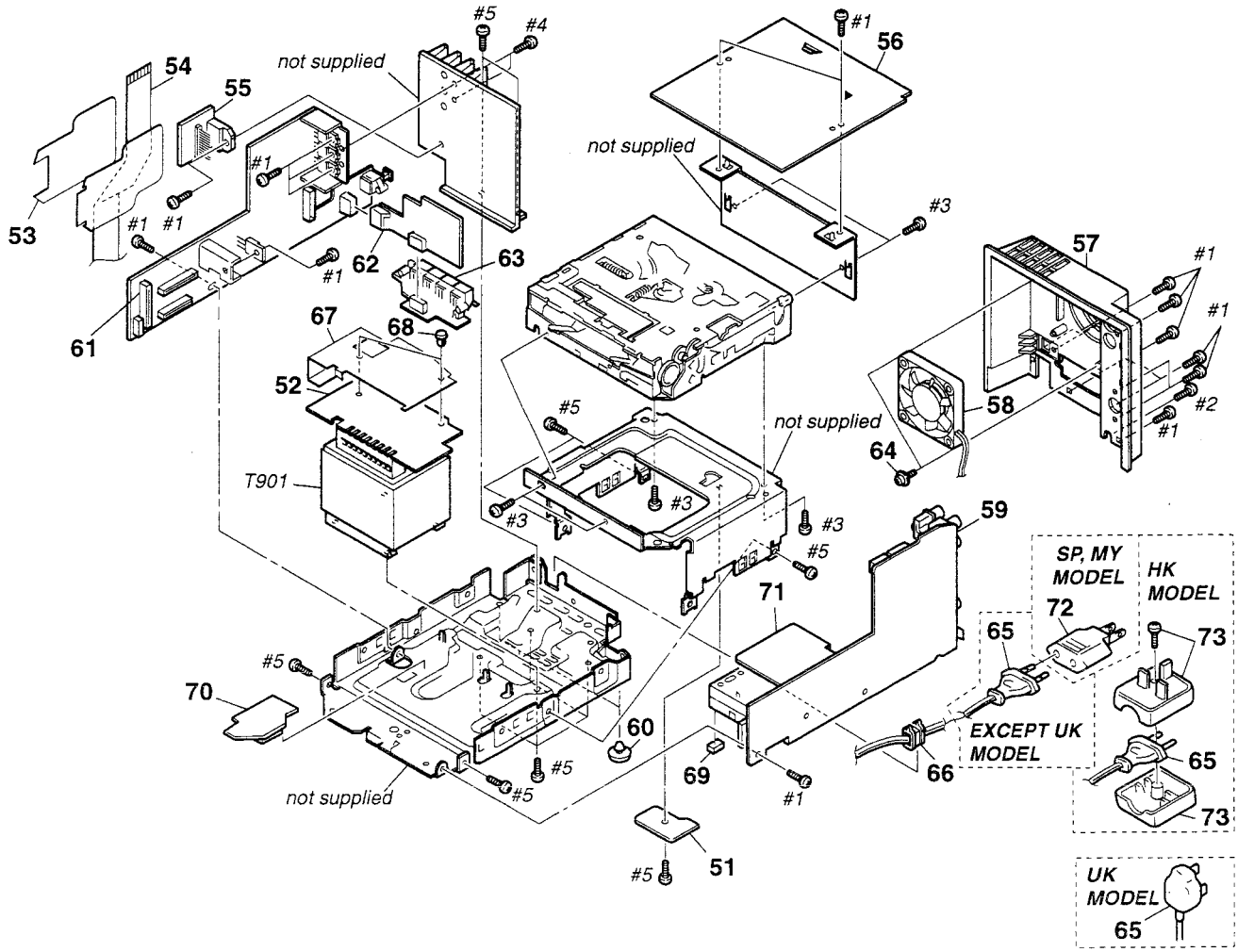
6-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	4-994-808-01	PANEL (ALUMINUM), FRONT (SP,MY,HK,JE)	
1	4-994-808-11	PANEL (ALUMINUM), FRONT (AEP,G,UK)	
2	4-942-636-21	EMBLEM (No.3.5), SONY	
3	4-994-813-01	FILTER (RM)	
* 4	1-667-387-11	HP BOARD	
* 5	4-994-819-31	CASE	
* 6	A-4403-540-A	PANEL BOARD, COMPLETE (SP,MY,HK,JE)	
* 6	A-4403-560-A	PANEL BOARD, COMPLETE (AEP,G)	
* 6	A-4403-727-A	PANEL BOARD, COMPLETE (UK)	

Ref. No.	Part No.	Description	Remarks
* 7	1-667-385-11	SWITCH BOARD	
8	4-930-336-61	FOOT (FELT)	
9	4-958-107-01	SCREW (BV/RING S TIGHT)	
10	3-363-099-51	SCREW (CASE 3 TP2)	
11	4-951-620-01	SCREW (2.6X8), +BVTP	
12	X-4948-993-1	PANEL (M) ASSY	
13	1-782-805-11	WIRE (FLAT TYPE) (5 CORE)	
14	1-782-781-11	WIRE (FLAT TYPE) (27 CORE)	
* 15	1-667-388-11	EJECT BOARD	

6-2. CHASSIS SECTION

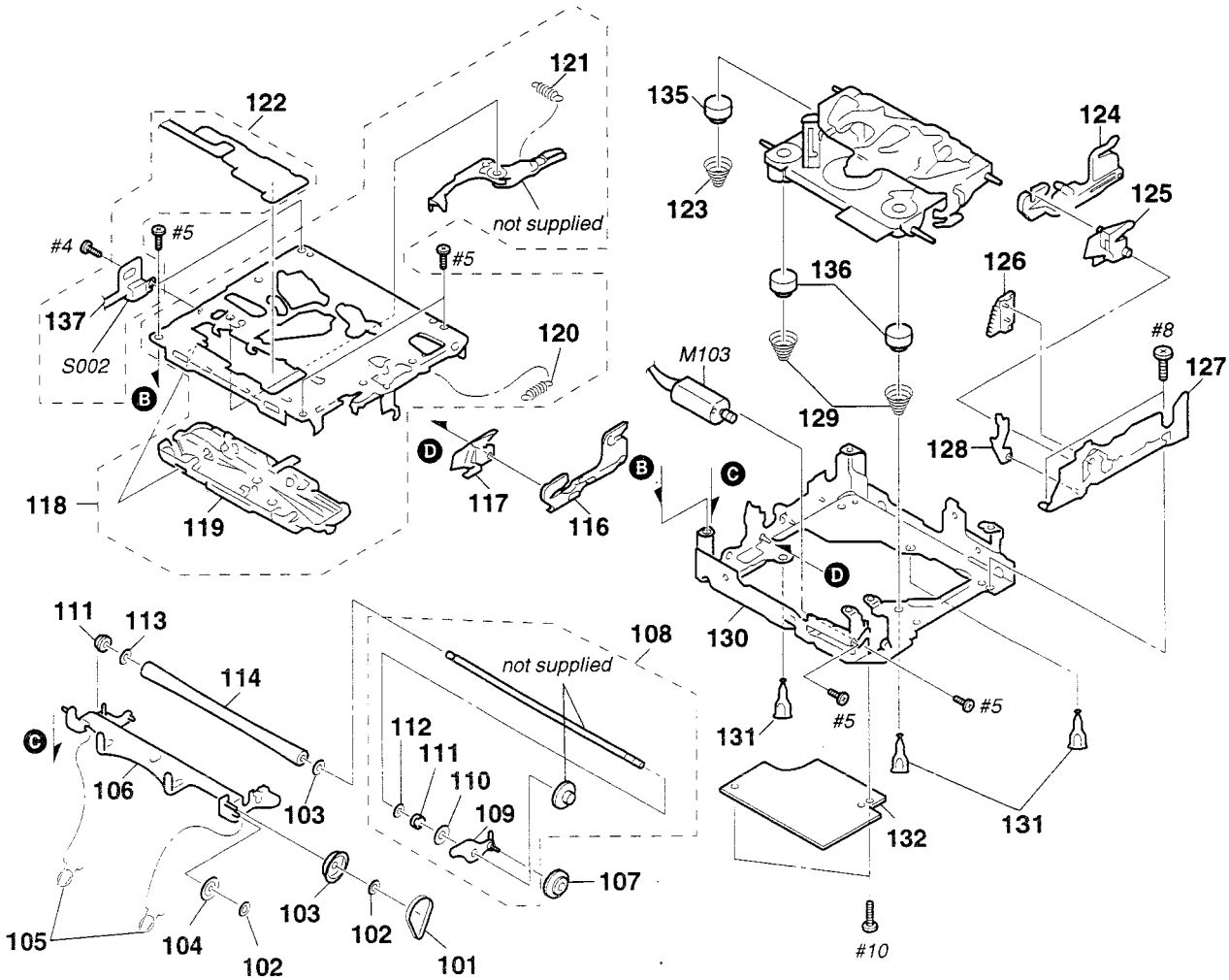


Ref. No.	Part No.	Description	Remarks
51	1-668-138-11	POSISTOR BOARD	
* 52	1-667-384-11	TRANS BOARD	
* 53	4-995-817-01	COVER (CABLE)	
54	1-782-780-11	WIRE (FLAT TYPE) (21 CORE)	
* 55	1-667-823-11	POWER IC BOARD	
* 56	A-4403-527-A	PRE BOARD, COMPLETE	
* 57	4-994-816-01	PANEL, BACK	
58	1-698-997-11	FAN, DC	
* 59	A-4403-536-A	FUNCTION BOARD, COMPLETE (SP,MY,HK,JE)	
* 59	A-4403-553-A	FUNCTION BOARD, COMPLETE (AEP,G)	
* 59	A-4403-726-A	FUNCTION BOARD, COMPLETE (UK)	
60	4-965-822-01	FOOT	
* 61	A-4403-537-A	POWER BOARD, COMPLETE (SP,MY,HK,JE)	
* 61	A-4403-555-A	POWER BOARD, COMPLETE (AEP,G,UK)	
* 62	1-667-822-11	RELAY BOARD	

Ref. No.	Part No.	Description	Remarks
* 63	1-667-386-11	SP TM BOARD	
64	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
⚠65	1-776-060-11	CORD, POWER (EXCEPT UK)	
⚠65	1-776-061-21	CORD, POWER (UK)	
66	3-703-244-00	BUSHING (2104), CORD	
* 67	4-994-825-01	COVER (TR)	
68	4-812-134-11	RIVET (DIA. 3.5), NYLON	
69	4-889-836-01	CUSHION	
* 70	1-667-382-11	VOLSEL BOARD	
* 71	A-4403-559-A	RDS BOARD, COMPLETE (AEP,G,UK)	
⚠72	1-569-008-11	ADAPTOR, CONVERSION 2P (SP,MY)	
⚠73	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	
⚠T901	1-431-559-11	TRANSFORMER, POWER (AEP,G,UK)	
⚠T901	1-431-560-11	TRANSFORMER, POWER (SP,MY,HK,JE)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

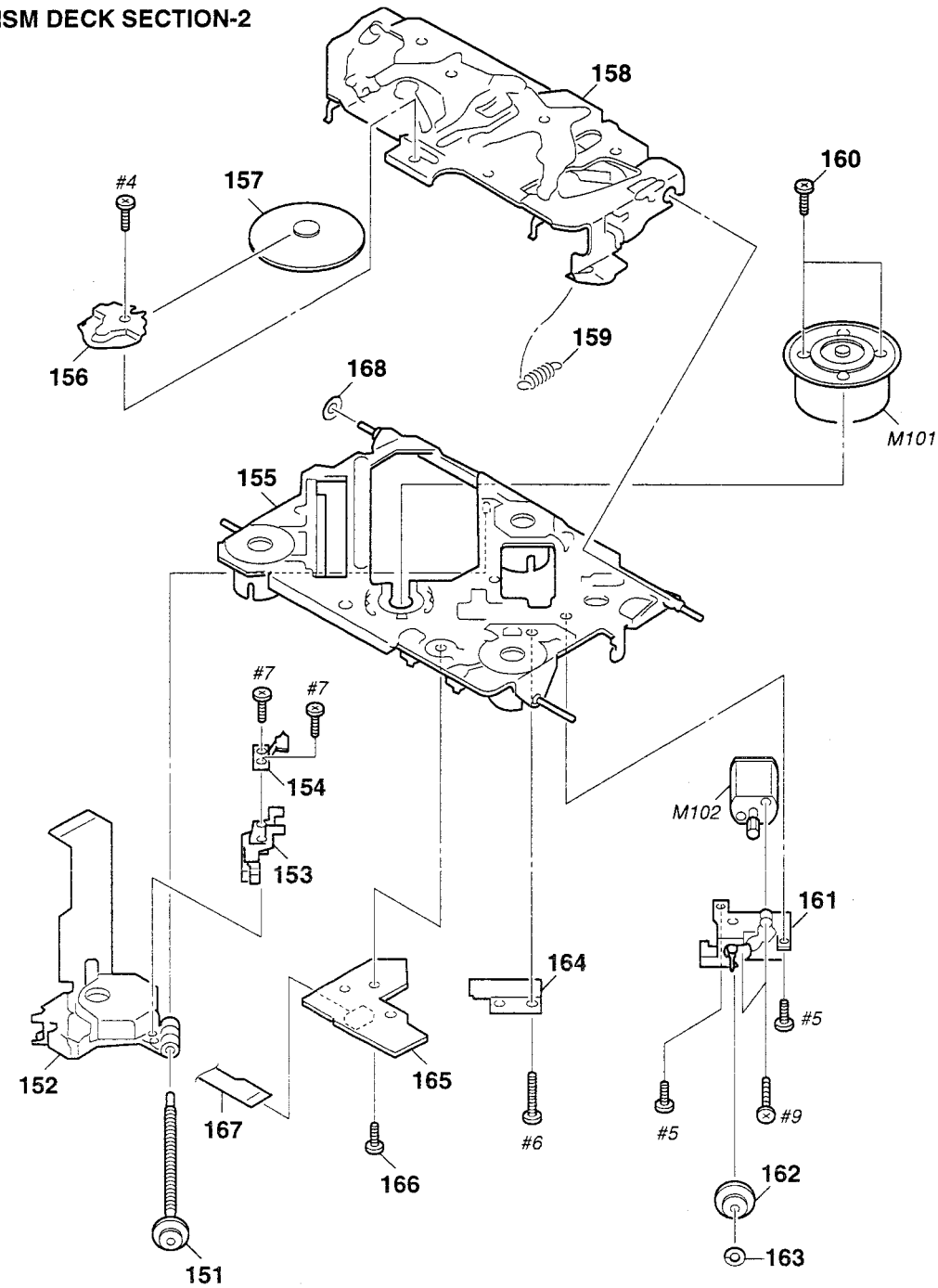
6-3. MECHANISM DECK SECTION-1 (CDM50)



Ref. No.	Part No.	Description	Remarks
101	3-387-776-01	BELT (L)	
102	3-578-242-11	WASHER	
103	3-384-894-01	GEAR (R1)	
104	3-384-895-01	GEAR (R2)	
105	3-384-900-01	SPRING (PRESS)	
* 106	X-3366-857-1	ARM ASSY, ROLLER	
107	3-384-896-01	GEAR (DOWN)	
108	A-3252-591-A	GEAR ASSY, ROLLER	
109	X-3366-858-4	ARM ASSY, FRICTION	
110	3-384-899-01	SPRING (FRICTION)	
111	3-384-892-01	BEARING (ROLLER)	
112	3-386-150-01	RING (ROLLER), RETAINING	
113	3-701-438-11	WASHER, 2.5	
114	3-909-408-01	ROLLER (T2)	
116	3-384-888-01	SLIDER (L)	
117	3-384-887-01	LEVER (L)	
* 118	X-3371-324-3	CHASSIS (T2) ASSY	
119	3-906-923-11	GUIDE (DISK 2)	

Ref. No.	Part No.	Description	Remarks
120	3-906-921-01	SPRING, TENSION	
121	3-906-924-01	SPRING, TENSION	
* 122	1-653-378-51	SENSOR BOARD	
123	3-907-588-11	SPRING (FL2)	
124	X-3366-102-1	SLIDER (R) ASSY	
125	3-384-889-01	LEVER (R)	
126	3-906-939-11	GEAR (RACK 2)	
* 127	X-3366-853-1	CHASSIS (R) ASSY	
128	3-906-940-01	LEVER (ST2)	
129	3-384-916-01	SPRING (FL)	
* 130	X-3373-302-2	CHASSIS (M) ASSY	
131	3-384-923-01	SHAFT (DAMPER)	
* 132	A-4699-821-A	BD BOARD, COMPLETE	
135	3-384-914-01	DAMPER	
136	3-384-914-12	DAMPER	
137	1-658-806-11	SENSOR FLEXIBLE BOARD	
M103	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
S002	1-692-441-11	SWITCH, MICROPHONE (DISC DET)	

6-4. MECHANISM DECK SECTION-2 (CDM50)



Ref. No.	Part No.	Description	Remarks
151	A-3252-586-A	SHAFT (SL) ASSY	
⚠152	8-848-283-11	OPTICAL PICK-UP KSS-313A	
153	3-384-922-01	GEAR (SL FEED)	
154	3-384-920-01	RETAINER (SL FEED)	
155	X-3370-190-1	CHASSIS (OPT) ASSY (OUTSERT)	
* 156	3-384-915-11	BRACKET (CP)	
* 157	3-384-918-01	RETAINER (DISC)	
158	X-3372-948-1	ARM ASSY, CHUCKING	
159	3-384-917-01	SPRING (CH)	
160	3-926-152-01	SCREW (+PM1.7X2.5)	
161	X-3366-100-1	BASE (DRIVING) ASSY	

Ref. No.	Part No.	Description	Remarks
162	3-384-912-11	GEAR (K2)	
163	3-570-615-02	POLY-WASHER (DIA.1.2)	
164	3-384-913-11	SPRING (THRUST RETAINER)	
* 165	1-653-379-51	MOTOR BOARD	
166	3-918-103-11	SCREW	
167	1-653-376-11	MOTOR FLEXIBLE BOARD	
168	3-701-442-01	WASHER, POLYETHYLENE	
M101	X-3367-484-2	MOTOR (SP) ASSY (SPINDLE)	
M102	A-3252-585-A	MOTOR (SL) ASSY (SLED)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 7
ELECTRICAL PARTS LIST

BD

NOTE:

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Abbreviation
  SP : Singapore
  MY : Malaysia
  HK : Hong Kong
  G : German
  JE : Tourist
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

Ref. No.	Part No.	Description			Remarks
*	A-4699-821-A	BD BOARD, COMPLETE			
		**********			
	3-934-077-01	CUSHION (LIGHT INTERCEPTION)			
		< CAPACITOR >			
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C112	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C113	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C114	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C117	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C118	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C119	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C120	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C121	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C126	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C127	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C132	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C133	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C134	1-164-346-11	CERAMIC CHIP	1uF		16V
C135	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C136	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C137	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C139	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C140	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C141	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C142	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C145	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C146	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C147	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C148	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C149	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C171	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C172	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C173	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C174	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C175	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C178	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C179	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C180	1-128-065-11	ELECT	68uF	20%	10V
C181	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C182	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C183	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C184	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN101	1-565-728-11	CONNECTOR, FPC 17P			
CN102	1-770-298-31	HOUSING, CONNECTOR 28P			
CN104	1-580-055-21	PIN, CONNECTOR 2P			
CN105	1-774-417-11	CONNECTOR, FPC 5P			
CN106	1-770-345-21	CONNECTOR, FPC 7P			
CN107	1-778-638-21	PIN, CONNECTOR (PC BOARD) 2P			
		< FERRITE BEAD >			
FB101	1-500-245-11	INDUCTOR 0UH			
FB102	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB103	1-500-245-11	INDUCTOR 0UH			
FB104	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB105	1-414-386-11	INDUCTOR, FERRITE BEAD			
FB106	1-414-386-11	INDUCTOR, FERRITE BEAD			
		< IC >			
IC101	8-752-069-56	IC CXA1782BQ			
IC102	8-759-291-06	IC BA6397FP			
IC103	8-752-372-94	IC CXD2507AQ			
IC104	8-759-185-29	IC PCM1710U-B			
IC105	8-759-823-87	IC LB1638M			

BD EJECT FUNCTION

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q1	8-729-032-35	PHOTO TRANSISTOR CPT-230S-C-TU			
Q2	8-729-032-35	PHOTO TRANSISTOR CPT-230S-C-TU			
Q4	8-729-032-35	PHOTO TRANSISTOR CPT-230S-C-TU			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
Q102	8-729-424-08	TRANSISTOR UN2111			
		< RESISTOR >			
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R103	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R104	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R105	1-216-093-00	METAL CHIP	68K	5%	1/10W
R106	1-216-093-00	METAL CHIP	68K	5%	1/10W
R107	1-216-093-00	METAL CHIP	68K	5%	1/10W
R108	1-216-093-00	METAL CHIP	68K	5%	1/10W
R109	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-083-00	METAL CHIP	27K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R118	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R119	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R120	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R121	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R122	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R123	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R124	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R126	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R127	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R128	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R129	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R138	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R139	1-216-033-00	METAL CHIP	220	5%	1/10W
R140	1-216-081-00	METAL CHIP	22K	5%	1/10W
R141	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R142	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R143	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R144	1-216-073-00	METAL CHIP	10K	5%	1/10W
R145	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R146	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R147	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R148	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R149	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R150	1-216-037-00	METAL CHIP	330	5%	1/10W
R151	1-216-037-00	METAL CHIP	330	5%	1/10W
R152	1-216-037-00	METAL CHIP	330	5%	1/10W
R154	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R156	1-216-085-00	METAL CHIP	33K	5%	1/10W
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
R171	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R172	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R173	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R174	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R175	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R176	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R177	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R183	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R184	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R185	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R186	1-216-295-91	CONDUCTOR, CHIP (2012)			
R187	1-216-295-91	CONDUCTOR, CHIP (2012)			
R188	1-216-295-91	CONDUCTOR, CHIP (2012)			
R189	1-216-295-91	CONDUCTOR, CHIP (2012)			
		< VARIABLE RESISTOR >			
RV101	1-223-587-11	RES, ADJ, CARBON 22K			
RV102	1-223-587-11	RES, ADJ, CARBON 22K			
RV103	1-223-587-11	RES, ADJ, CARBON 22K			
		< SWITCH >			
S1	1-571-754-31	SWITCH, PUSH (1 KEY)			
		< VIBRATOR >			
X101	1-767-430-11	VIBRATOR, CRYSTAL 16.9344MHz			
**********					
*	1-667-388-11	EJECT BOARD			
		**********			
		< CONNECTOR >			
CN753	1-580-918-11	HOUSING, CONNECTOR 5P			
		< SWITCH >			
S755	1-762-875-21	SWITCH, KEYBOARD (≜OPEN/CLOSE)			
**********					
*	A-4403-553-A	FUNCTION BOARD, COMPLETE (AEP,G)			
		**********			
	A-4403-536-A	FUNCTION BOARD, COMPLETE (SP,MY,HK,JE)			
		**********			
*	A-4403-726-A	FUNCTION BOARD, COMPLETE (UK)			
		**********			
		< CAPACITOR >			
C401	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C402	1-126-791-11	ELECT	10uF	20%	35V
C403	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C404	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C405	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C406	1-126-791-11	ELECT	10uF	20%	35V

Ref. No.	Part No.	Description			Remarks
C407	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C408	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C426	1-164-159-11	CERAMIC	0.1uF		50V
C430	1-164-159-11	CERAMIC	0.1uF		50V
C431	1-164-159-11	CERAMIC	0.1uF		50V
C432	1-126-059-11	ELECT	10uF	20%	50V
C433	1-126-059-11	ELECT	10uF	20%	50V
C436	1-164-159-11	CERAMIC	0.1uF		50V
C437	1-126-934-11	ELECT	220uF	20%	16V
C438	1-164-159-11	CERAMIC	0.1uF		50V
C450	1-164-159-11	CERAMIC	0.1uF		50V
C451	1-161-494-00	CERAMIC	0.022uF		25V
C493	1-164-159-11	CERAMIC	0.1uF		50V
C501	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C502	1-126-791-11	ELECT	10uF	20%	35V
C503	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C504	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C505	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C506	1-126-791-11	ELECT	10uF	20%	35V
C507	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
C508	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,G,UK)
		< CONNECTOR >			
CN401	1-770-406-11	CONNECTOR, BOARD TO BOARD 10P			
CN402	1-779-968-11	SOCKET, CONNECTOR			
* CN403	1-774-813-11	CONNECTOR, BOARD TO BOARD 7P(AEP,G,UK)			
* CN404	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN407	1-770-408-11	CONNECTOR, BOARD TO BOARD 14P			
CN410	1-778-310-11	PLUG, CONNECTOR 2P			
		< JACK >			
CNJ401	1-770-501-11	JACK 10P (MD)			
CNJ402	1-770-501-11	JACK 10P (TAPE)			
		< DIODE >			
D401	8-719-911-19	DIODE 1SS119			
D402	8-719-911-19	DIODE 1SS119			
D403	8-719-911-19	DIODE 1SS119			
D404	8-719-933-39	DIODE HZS6C1L			
D405	8-719-911-19	DIODE 1SS119			
D406	8-719-911-19	DIODE 1SS119 (AEP,G,UK)			
D407	8-719-911-19	DIODE 1SS119 (AEP,G,UK)			
D408	8-719-911-19	DIODE 1SS119 (AEP,G,UK)			
		< IC >			
IC401	8-759-195-14	IC SC027MG051BCP			
IC402	8-759-195-21	IC SC027MG066BF-T1			
IC403	8-759-195-21	IC SC027MG066BF-T1			
IC501	8-759-195-14	IC SC027MG051BCP			
		< JACK >			
J401	1-573-028-31	JACK, PIN 4P (VIDEO/PC(L-IN,L-OUT,R-IN,R-OUT))			
J402	1-779-940-11	CONNECTOR, COAXIAL (ANTENNA(AM,FM75))			

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q401	8-729-422-57	TRANSISTOR UN4111			
Q404	8-729-620-05	TRANSISTOR 2SC2603-EF			
		< RESISTOR >			
R401	1-249-426-11	CARBON	5.6K	5%	1/4W
R402	1-249-427-11	CARBON	6.8K	5%	1/4W F
R403	1-249-413-11	CARBON	470	5%	1/4W F
R404	1-249-441-11	CARBON	100K	5%	1/4W
R405	1-249-413-11	CARBON	470	5%	1/4W F
R407	1-249-417-11	CARBON	1K	5%	1/4W F
R408	1-249-441-11	CARBON	100K	5%	1/4W
R409	1-249-409-11	CARBON	220	5%	1/4W F
R410	1-249-441-11	CARBON	100K	5%	1/4W
R411	1-249-409-11	CARBON	220	5%	1/4W F
R412	1-249-441-11	CARBON	100K	5%	1/4W
R415	1-249-437-11	CARBON	47K	5%	1/4W
R416	1-249-437-11	CARBON	47K	5%	1/4W
R417	1-249-437-11	CARBON	47K	5%	1/4W
R418	1-249-433-11	CARBON	22K	5%	1/4W
R430	1-247-807-31	CARBON	100	5%	1/4W
R431	1-249-417-11	CARBON	1K	5%	1/4W F
R432	1-249-393-11	CARBON	10	5%	1/4W F
R433	1-249-429-11	CARBON	10K	5%	1/4W
R434	1-260-095-11	CARBON	470	5%	1/2W
R435	1-249-433-11	CARBON	22K	5%	1/4W
R436	1-249-433-11	CARBON	22K	5%	1/4W
R437	1-247-807-31	CARBON	100	5%	1/4W
R438	1-247-807-31	CARBON	100	5%	1/4W
R439	1-247-807-31	CARBON	100	5%	1/4W
R440	1-247-807-31	CARBON	100	5%	1/4W
R441	1-247-807-31	CARBON	100	5%	1/4W
R461	1-247-843-11	CARBON	3.3K	5%	1/4W
R462	1-249-429-11	CARBON	10K	5%	1/4W
R495	1-247-843-11	CARBON	3.3K	5%	1/4W
R501	1-249-426-11	CARBON	5.6K	5%	1/4W
R502	1-249-427-11	CARBON	6.8K	5%	1/4W F
R503	1-249-413-11	CARBON	470	5%	1/4W F
R504	1-249-441-11	CARBON	100K	5%	1/4W
R505	1-249-413-11	CARBON	470	5%	1/4W F
R507	1-249-417-11	CARBON	1K	5%	1/4W F
R508	1-249-441-11	CARBON	100K	5%	1/4W
R509	1-249-409-11	CARBON	220	5%	1/4W F
R510	1-249-441-11	CARBON	100K	5%	1/4W
R511	1-249-409-11	CARBON	220	5%	1/4W F
R512	1-249-441-11	CARBON	100K	5%	1/4W
R561	1-247-843-11	CARBON	3.3K	5%	1/4W
R562	1-249-429-11	CARBON	10K	5%	1/4W
		< TUNER UNIT >			
TB401	1-233-654-11	ENCAPSULATED COMPONENT (SP,MY,HK,JE)			
TB401	1-234-028-11	ENCAPSULATED COMPONENT (UK)			
TB401	1-693-377-11	TUNER (AEP,G)			

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HP **MOTOR** **PANEL**

Ref. No.	Part No.	Description			Remarks
*	1-667-387-11	HP BOARD			
		*********			
		< CAPACITOR >			
C491	1-162-294-31	CERAMIC	0.001uF	10%	50V
C591	1-162-294-31	CERAMIC	0.001uF	10%	50V
		< JACK >			
J660	1-764-106-21	JACK (PHONES)			
**********					
*	1-653-379-51	MOTOR BOARD			
		**********			
		< JACK >			
CNJ303	1-770-348-21	CONNECTOR, FPC 7P			
		< SWITCH >			
S301	1-571-754-31	SWITCH, PUSH (1 KEY)			
**********					
*	A-4403-540-A	PANEL BOARD, COMPLETE (SP,MY,HK,JE)			
		**********			
*	A-4403-560-A	PANEL BOARD, COMPLETE (AEP,G)			
		**********			
*	A-4403-727-A	PANEL BOARD, COMPLETE (UK)			
		**********			
*	4-932-810-11	CUSHION (FL)			
*	4-994-815-01	HOLDER (FL)			
		< CAPACITOR >			
C701	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C702	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C703	1-126-157-11	ELECT	10uF	20%	16V
C704	1-124-584-00	ELECT	100uF	20%	10V
C705	1-104-905-11	CAPACITOR	0.22F		5.5V
C706	1-126-157-11	ELECT	10uF	20%	16V
C707	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C708	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C709	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C710	1-101-004-00	CERAMIC	0.01uF		50V
C711	1-102-958-00	CERAMIC	20PF	5%	50V
C712	1-102-958-00	CERAMIC	20PF	5%	50V
C713	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C715	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C716	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C717	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C718	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C719	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C720	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C721	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C722	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C723	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C724	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C725	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C726	1-163-251-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description			Remarks
C727	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C728	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C729	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C730	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C731	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C751	1-126-154-11	ELECT	47uF	20%	6.3V
C752	1-165-319-11	CERAMIC CHIP	0.1uF		50V
		< CONNECTOR >			
* CN701	1-568-842-11	SOCKET, CONNECTOR 27P			
CN702	1-779-970-11	PLUG, CONNECTOR			
CN703	1-779-938-11	CONNECTOR, BOARD TO BOARD 8P			
CN752	1-580-918-11	HOUSING, CONNECTOR 5P			
		< DIODE >			
D701	8-719-016-74	DIODE 1SS352			
D702	8-719-016-74	DIODE 1SS352			
D703	8-719-210-33	DIODE EC10DS2			
D704	8-719-210-33	DIODE EC10DS2			
		< FILTER >			
FL701	1-517-701-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC701	8-759-481-03	IC uPD780206GF-023-3BA			
IC751	8-759-459-84	IC NJL56H400 (REMOTE SENSOR)			
IC850	8-759-165-80	IC PST600C-T			
		< COIL >			
L701	1-412-344-41	INDUCTOR 22uH			
		< TRANSISTOR >			
Q701	8-729-424-59	TRANSISTOR UN2212			
Q704	8-729-421-22	TRANSISTOR UN2211			
		< RESISTOR >			
R701	1-216-073-00	METAL CHIP	10K	5%	1/10W
R702	1-216-073-00	METAL CHIP	10K	5%	1/10W
R704	1-216-073-00	METAL CHIP	10K	5%	1/10W
R706	1-216-025-91	METAL GLAZE	100	5%	1/10W
R707	1-216-029-00	METAL CHIP	150	5%	1/10W
R708	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R709	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R710	1-216-025-91	METAL GLAZE	100	5%	1/10W
R711	1-216-025-91	METAL GLAZE	100	5%	1/10W
R712	1-216-025-91	METAL GLAZE	100	5%	1/10W
R713	1-216-025-91	METAL GLAZE	100	5%	1/10W
R714	1-216-025-91	METAL GLAZE	100	5%	1/10W
R715	1-216-025-91	METAL GLAZE	100	5%	1/10W
R716	1-216-025-91	METAL GLAZE	100	5%	1/10W
R717	1-216-025-91	METAL GLAZE	100	5%	1/10W
R718	1-216-025-91	METAL GLAZE	100	5%	1/10W
R719	1-216-025-91	METAL GLAZE	100	5%	1/10W
R720	1-216-025-91	METAL GLAZE	100	5%	1/10W
R721	1-216-017-91	METAL GLAZE	47	5%	1/10W
R722	1-216-017-91	METAL GLAZE	47	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R723	1-216-025-91	METAL GLAZE	100	5%	1/10W
R724	1-216-017-91	METAL GLAZE	47	5%	1/10W
R725	1-216-017-91	METAL GLAZE	47	5%	1/10W
R726	1-216-025-91	METAL GLAZE	100	5%	1/10W
R727	1-216-085-00	METAL CHIP	33K	5%	1/10W
R728	1-216-085-00	METAL CHIP	33K	5%	1/10W
R729	1-216-025-91	METAL GLAZE	100	5%	1/10W
R730	1-216-025-91	METAL GLAZE	100	5%	1/10W
R731	1-216-025-91	METAL GLAZE	100	5%	1/10W
R732	1-216-025-91	METAL GLAZE	100	5%	1/10W
R733	1-216-025-91	METAL GLAZE	100	5%	1/10W
R734	1-216-073-00	METAL CHIP	10K	5%	1/10W
R735	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R736	1-216-073-00	METAL CHIP	10K	5%	1/10W
R737	1-216-025-91	METAL GLAZE	100	5%	1/10W
R738	1-216-025-91	METAL GLAZE	100	5%	1/10W
R739	1-216-025-91	METAL GLAZE	100	5%	1/10W
R740	1-216-075-00	METAL CHIP	12K	5%	1/10W (UK)
R740	1-216-077-00	METAL CHIP	15K	5%	1/10W (SP,MY,HK,JE)
R740	1-216-081-00	METAL CHIP	22K	5%	1/10W (AEP,G)
R741	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (SP,MY,HK,JE)
R741	1-216-085-00	METAL CHIP	33K	5%	1/10W (AEP,G,UK)
R742	1-216-109-00	METAL CHIP	330K	5%	1/10W
R743	1-216-041-00	METAL CHIP	470	5%	1/10W
R744	1-216-041-00	METAL CHIP	470	5%	1/10W
R745	1-216-025-91	METAL GLAZE	100	5%	1/10W
R746	1-216-025-91	METAL GLAZE	100	5%	1/10W
R755	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R756	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R757	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R758	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R759	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R760	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R771	1-216-025-91	METAL GLAZE	100	5%	1/10W (AEP,G)
R772	1-216-025-91	METAL GLAZE	100	5%	1/10W (SP,MY,HK,JE)
R773	1-216-025-91	METAL GLAZE	100	5%	1/10W (UK)
		< SWITCH >			
S761	1-762-875-21	SWITCH, KEYBOARD (POWER)			
		< VIBRATOR >			
X701	1-579-233-11	VIBRATOR, CERAMIC 5MHz			
X702	1-567-098-41	VIBRATOR, CRYSTAL 32KHz			

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Ref. No.	Part No.	Description			Remarks
*	1-668-138-11	POSISTOR BOARD			
		**********			
		< CAPACITOR >			
C915	1-164-159-11	CERAMIC	0.1uF		50V
C916	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN911	1-564-521-11	PLUG, CONNECTOR			
		< THERMISTOR >			
THP901	1-801-671-11	THERMISTOR, POSITIVE			
THP902	1-801-671-11	THERMISTOR, POSITIVE			
THP903	1-801-671-11	THERMISTOR, POSITIVE			
THP904	1-801-671-11	THERMISTOR, POSITIVE			

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*	A-4403-537-A	POWER BOARD, COMPLETE (SP,MY,HK,JE)			
		**********			
*	A-4403-555-A	POWER BOARD, COMPLETE (AEP,G,UK)			
		**********			
		< CAPACITOR >			
C801	1-126-043-11	ELECT	0.47uF	20%	50V
C803	1-126-868-11	ELECT	47uF	20%	50V
C805	1-164-159-11	CERAMIC	0.1uF		50V (AEP,G,UK)
C810	1-126-933-11	ELECT	100uF	20%	16V
C811	1-126-967-11	ELECT	47uF	20%	50V
C851	1-126-043-11	ELECT	0.47uF	20%	50V
C853	1-126-868-11	ELECT	47uF	20%	50V
C855	1-164-159-11	CERAMIC	0.1uF		50V (AEP,G,UK)
C893	1-126-868-11	ELECT	47uF	20%	50V
C894	1-126-868-11	ELECT	47uF	20%	50V
C901	1-126-029-11	ELECT	3300uF	20%	25V
C902	1-126-029-11	ELECT	3300uF	20%	25V
C903	1-126-943-11	ELECT	2200uF	20%	25V
C905	1-126-376-11	ELECT	470uF	20%	25V
C906	1-126-233-11	ELECT	22uF	20%	50V
C908	1-136-165-00	FILM	0.1uF	5%	50V
C909	1-136-165-00	FILM	0.1uF	5%	50V
C911	1-126-868-11	ELECT	47uF	20%	50V
C912	1-164-159-11	CERAMIC	0.1uF		50V
C914	1-162-306-11	CERAMIC	0.01uF	20%	16V
C931	1-126-096-11	ELECT	10uF	20%	35V
C932	1-126-096-11	ELECT	10uF	20%	35V
C933	1-126-096-11	ELECT	10uF	20%	35V
C934	1-126-096-11	ELECT	10uF	20%	35V
C935	1-126-096-11	ELECT	10uF	20%	35V
C936	1-126-096-11	ELECT	10uF	20%	35V
C937	1-164-159-11	CERAMIC	0.1uF		50V
C941	1-126-868-11	ELECT	47uF	20%	50V
C942	1-164-159-11	CERAMIC	0.1uF		50V
C943	1-126-052-11	ELECT	100uF	20%	35V
C951	1-164-159-11	CERAMIC	0.1uF		50V
C952	1-164-159-11	CERAMIC	0.1uF		50V
C960	1-126-025-11	ELECT	330uF	20%	16V
C961	1-162-306-11	CERAMIC	0.01uF	20%	16V

POWER | POWER IC

Ref. No.	Part No.	Description			Remarks
C962	1-162-306-11	CERAMIC	0.01uF	20%	16V
C963	1-162-306-11	CERAMIC	0.01uF	20%	16V
C965	1-126-233-11	ELECT	22uF	20%	50V
C966	1-164-159-11	CERAMIC	0.1uF		50V
C967	1-126-923-11	ELECT	220uF	20%	10V
		< CONNECTOR >			
* CN802	1-569-493-11	SOCKET, CONNECTOR 7P			
* CN806	1-562-334-00	SOCKET, CONNECTOR 10P			
* CN908	1-506-469-11	PIN, CONNECTOR 4P			
CN912	1-568-838-11	SOCKET, CONNECTOR 21P			
* CN913	1-770-656-11	CONNECTOR, FFC/FPC 28P			
* CN916	1-568-842-11	SOCKET, CONNECTOR 27P			
* CN917	1-568-951-11	PIN, CONNECTOR 2P			
		< DIODE >			
D801	8-719-911-19	DIODE 1SS119			
D802	8-719-911-19	DIODE 1SS119			
D803	8-719-911-19	DIODE 1SS119			
D901	8-719-025-03	DIODE RBA-402-SL			
D902	8-719-200-02	DIODE 10E2			
D903	8-719-200-02	DIODE 10E2			
D904	8-719-200-82	DIODE 11ES2			
D905	8-719-200-82	DIODE 11ES2			
D906	8-719-200-82	DIODE 11ES2			
D907	8-719-200-82	DIODE 11ES2			
D910	8-719-001-79	DIODE UZL-12H1-TP			
D934	8-719-200-02	DIODE 10E2			
D935	8-719-200-02	DIODE 10E2			
D936	8-719-200-02	DIODE 10E2			
D938	8-719-911-19	DIODE 1SS119			
D941	8-719-933-39	DIODE HZS6C1L			
		< TERMINAL >			
EPT901	1-537-771-21	TERMINAL BOARD, GROUND			
		< IC >			
IC802	8-759-165-80	IC PST600C-T			
IC901	8-749-923-04	IC TOTX178 (CD OPTICAL DIGITAL OUT)			
IC931	8-759-231-53	IC TA7805S			
IC932	8-759-604-86	IC M5F7807L			
IC933	8-759-231-53	IC TA7805S			
IC941	8-759-633-42	IC M5293L			
		< COIL >			
L901	1-408-413-00	INDUCTOR 22uH			
L902	1-410-322-11	INDUCTOR 3.3uH			
		< TRANSISTOR >			
Q801	8-729-900-80	TRANSISTOR DTC114ES			
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q803	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q804	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q805	8-729-422-57	TRANSISTOR UN4111			
Q910	8-729-202-67	TRANSISTOR 2SK246-GR3			
Q911	8-729-021-82	TRANSISTOR 2SD2396K			
Q931	8-729-140-97	TRANSISTOR 2SB734-34			

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R801	1-249-417-11	CARBON	1K	5%	1/4W F
R802	1-247-870-11	CARBON	43K	5%	1/4W
R803	1-249-417-11	CARBON	1K	5%	1/4W F
R807	1-260-091-11	CARBON	220	5%	1/2W
R809	1-249-437-11	CARBON	47K	5%	1/4W
R810	1-249-441-11	CARBON	100K	5%	1/4W
R811	1-249-441-11	CARBON	100K	5%	1/4W
R813	1-249-438-11	CARBON	56K	5%	1/4W
⚠R814	1-219-122-91	FUSIBLE	0.33	5%	1/4W F
R841	1-249-441-11	CARBON	100K	5%	1/4W
R851	1-249-417-11	CARBON	1K	5%	1/4W F
R852	1-247-870-11	CARBON	43K	5%	1/4W
R853	1-249-417-11	CARBON	1K	5%	1/4W F
R857	1-260-091-11	CARBON	220	5%	1/2W
R859	1-249-438-11	CARBON	56K	5%	1/4W
⚠R901	1-208-737-51	FUSIBLE	2.2	5%	1/4W F
⚠R912	1-212-958-00	FUSIBLE	10	5%	1/2W F
⚠R915	1-219-122-91	FUSIBLE	0.33	5%	1/4W F
⚠R916	1-219-122-91	FUSIBLE	0.33	5%	1/4W F
R931	1-249-421-11	CARBON	2.2K	5%	1/4W F
R932	1-249-409-11	CARBON	220	5%	1/4W F
R944	1-249-437-11	CARBON	47K	5%	1/4W
R945	1-247-807-31	CARBON	100	5%	1/4W
R946	1-247-807-31	CARBON	100	5%	1/4W
⚠R947	1-219-122-91	FUSIBLE	0.33	5%	1/4W F
		< RELAY >			
RY801	1-755-126-11	RELAY			
		< THERMISTOR(POSITIVE) >			
THP801	1-801-829-11	THERMISTOR, POSITIVE			
**********					
*	1-667-823-11	POWER IC BOARD			
		**********			
		< CAPACITOR >			
C807	1-162-219-31	CERAMIC	68PF	5%	50V
C831	1-164-159-11	CERAMIC	0.1uF		50V
C857	1-162-219-31	CERAMIC	68PF	5%	50V
C881	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN805	1-506-608-11	PIN, CONNECTOR 10P			
		< IC >			
IC801	8-759-333-24	IC LM1876TF			
		< RESISTOR >			
R804	1-249-437-11	CARBON	47K	5%	1/4W
R831	1-249-389-11	CARBON	4.7	5%	1/4W F
R854	1-249-437-11	CARBON	47K	5%	1/4W
R881	1-249-389-11	CARBON	4.7	5%	1/4W F
**********					

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
*	A-4403-527-A	PRE BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C409	1-126-233-11	ELECT	22uF	20%	50V
C410	1-126-233-11	ELECT	22uF	20%	50V
C411	1-162-207-31	CERAMIC	22PF	5%	50V
C412	1-136-177-00	FILM	1uF	5%	50V
C413	1-136-177-00	FILM	1uF	5%	50V
C414	1-126-961-11	ELECT	2.2uF	20%	50V
C415	1-137-364-11	FILM	0.001uF	5%	50V
C416	1-136-165-00	FILM	0.1uF	5%	50V
C417	1-126-233-11	ELECT	22uF	20%	50V
C421	1-126-233-11	ELECT	22uF	20%	50V
C422	1-164-159-11	CERAMIC	0.1uF		50V
C423	1-164-159-11	CERAMIC	0.1uF		50V
C439	1-126-514-11	ELECT	22uF	20%	16V
C440	1-136-162-00	FILM	0.056uF	5%	50V
C449	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C452	1-162-306-11	CERAMIC	0.01uF	20%	16V
C471	1-164-159-11	CERAMIC	0.1uF		50V
C472	1-126-795-11	ELECT	10uF	20%	50V
C473	1-126-059-11	ELECT	10uF	20%	50V
C474	1-126-059-11	ELECT	10uF	20%	50V
C475	1-126-059-11	ELECT	10uF	20%	50V
C476	1-164-159-11	CERAMIC	0.1uF		50V
C477	1-126-059-11	ELECT	10uF	20%	50V
C478	1-164-159-11	CERAMIC	0.1uF		50V
C479	1-162-294-31	CERAMIC	0.001uF	10%	50V
C481	1-162-290-31	CERAMIC	470PF	10%	50V
C482	1-164-159-11	CERAMIC	0.1uF		50V
C483	1-164-159-11	CERAMIC	0.1uF		50V
C509	1-126-233-11	ELECT	22uF	20%	50V
C510	1-126-233-11	ELECT	22uF	20%	50V
C511	1-162-207-31	CERAMIC	22PF	5%	50V
C512	1-136-177-00	FILM	1uF	5%	50V
C513	1-136-177-00	FILM	1uF	5%	50V
C514	1-126-961-11	ELECT	2.2uF	20%	50V
C515	1-137-364-11	FILM	0.001uF	5%	50V
C516	1-136-165-00	FILM	0.1uF	5%	50V
C517	1-126-233-11	ELECT	22uF	20%	50V
C521	1-126-233-11	ELECT	22uF	20%	50V
C522	1-162-306-11	CERAMIC	0.01uF	20%	16V
C523	1-162-306-11	CERAMIC	0.01uF	20%	16V
C539	1-126-514-11	ELECT	22uF	20%	16V
C540	1-136-162-00	FILM	0.056uF	5%	50V
C549	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C920	1-164-159-11	CERAMIC	0.1uF		50V
C921	1-164-159-11	CERAMIC	0.1uF		50V
C922	1-126-052-11	ELECT	100uF	20%	16V
C923	1-126-052-11	ELECT	100uF	20%	16V
C924	1-126-023-11	ELECT	100uF	20%	25V
C925	1-126-023-11	ELECT	100uF	20%	25V
C926	1-126-052-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN420	1-770-383-11	CONNECTOR, BOARD TO BOARD 14P			
* CN421	1-568-864-11	SOCKET, CONNECTOR 21P			
CN422	1-770-381-11	CONNECTOR, BOARD TO BOARD 10P			
CN423	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
		< DIODE >			
D921	8-719-001-21	DIODE UZL-9H1			
D922	8-719-001-21	DIODE UZL-9H1			
		< IC >			
IC404	8-759-711-35	IC NJM4580D			
IC410	8-759-275-23	IC BU2092			
IC422	8-759-195-20	IC SC027MG066BCP			
IC423	8-759-195-16	IC SC027MG052BCP			
IC424	8-759-070-78	IC TC9211P			
IC430	8-759-711-35	IC NJM4580D			
IC530	8-759-711-35	IC NJM4580D			
		< TRANSISTOR >			
Q420	8-729-422-57	TRANSISTOR UN4111			
Q421	8-729-422-57	TRANSISTOR UN4111			
Q422	8-729-900-80	TRANSISTOR DTC114ES			
Q424	8-729-141-30	TRANSISTOR 2SC3623A-LK			
Q524	8-729-141-30	TRANSISTOR 2SC3623A-LK			
Q921	8-729-140-96	TRANSISTOR 2SD774-34			
Q924	8-729-140-97	TRANSISTOR 2SB734-34			
		< RESISTOR >			
R421	1-249-437-11	CARBON	47K	5%	1/4W
R422	1-249-441-11	CARBON	100K	5%	1/4W
R423	1-249-417-11	CARBON	1K	5%	1/4W F
R424	1-249-429-11	CARBON	10K	5%	1/4W
R425	1-247-887-00	CARBON	220K	5%	1/4W
R426	1-249-442-11	CARBON	510	5%	1/4W
R427	1-247-858-11	CARBON	13K	5%	1/4W
R428	1-249-421-11	CARBON	2.2K	5%	1/4W F
R429	1-249-429-11	CARBON	10K	5%	1/4W
R442	1-249-428-11	CARBON	8.2K	5%	1/4W F
R443	1-247-887-00	CARBON	220K	5%	1/4W
R444	1-249-437-11	CARBON	47K	5%	1/4W
R445	1-249-431-11	CARBON	15K	5%	1/4W
R446	1-249-435-11	CARBON	33K	5%	1/4W
R448	1-249-435-11	CARBON	33K	5%	1/4W
R449	1-249-421-11	CARBON	2.2K	5%	1/4W F
R450	1-247-807-31	CARBON	100	5%	1/4W
R451	1-249-426-11	CARBON	5.6K	5%	1/4W
R460	1-247-887-00	CARBON	220K	5%	1/4W
R470	1-247-807-31	CARBON	100	5%	1/4W
R472	1-247-807-31	CARBON	100	5%	1/4W
R473	1-247-807-31	CARBON	100	5%	1/4W
R474	1-247-807-31	CARBON	100	5%	1/4W
R475	1-247-807-31	CARBON	100	5%	1/4W
R476	1-247-807-31	CARBON	100	5%	1/4W
R478	1-249-417-11	CARBON	1K	5%	1/4W F
R479	1-249-425-11	CARBON	4.7K	5%	1/4W F
R481	1-247-807-31	CARBON	100	5%	1/4W
R482	1-247-807-31	CARBON	100	5%	1/4W
R483	1-247-807-31	CARBON	100	5%	1/4W

PRE **RDS** **RELAY**

Ref. No.	Part No.	Description			Remarks
R484	1-247-807-31	CARBON	100	5%	1/4W
R485	1-247-807-31	CARBON	100	5%	1/4W
R486	1-249-437-11	CARBON	47K	5%	1/4W
R487	1-249-437-11	CARBON	47K	5%	1/4W
R488	1-249-432-11	CARBON	18K	5%	1/4W
R489	1-249-437-11	CARBON	47K	5%	1/4W
R490	1-249-437-11	CARBON	47K	5%	1/4W
R491	1-249-413-11	CARBON	470	5%	1/4W F
R493	1-249-413-11	CARBON	470	5%	1/4W F
R494	1-249-413-11	CARBON	470	5%	1/4W F
R521	1-249-437-11	CARBON	47K	5%	1/4W
R522	1-249-441-11	CARBON	100K	5%	1/4W
R523	1-249-417-11	CARBON	1K	5%	1/4W F
R524	1-249-429-11	CARBON	10K	5%	1/4W
R525	1-247-887-00	CARBON	220K	5%	1/4W
R526	1-249-442-11	CARBON	510	5%	1/4W
R527	1-247-858-11	CARBON	13K	5%	1/4W
R528	1-249-421-11	CARBON	2.2K	5%	1/4W F
R529	1-249-429-11	CARBON	10K	5%	1/4W
R542	1-249-428-11	CARBON	8.2K	5%	1/4W F
R543	1-247-887-00	CARBON	220K	5%	1/4W
R544	1-249-437-11	CARBON	47K	5%	1/4W
R545	1-249-431-11	CARBON	15K	5%	1/4W
R546	1-249-435-11	CARBON	33K	5%	1/4W
R548	1-249-435-11	CARBON	33K	5%	1/4W
R549	1-249-421-11	CARBON	2.2K	5%	1/4W F
R551	1-249-426-11	CARBON	5.6K	5%	1/4W
R560	1-247-887-00	CARBON	220K	5%	1/4W
R921	1-247-843-11	CARBON	3.3K	5%	1/4W
R925	1-247-843-11	CARBON	3.3K	5%	1/4W

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* A-4403-559-A RDS BOARD, COMPLETE (AEP,G,UK)
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< CAPACITOR >

C601	1-162-291-31	CERAMIC	560PF	10%	50V
C602	1-162-306-11	CERAMIC	0.01uF	20%	16V
C603	1-162-288-31	CERAMIC	330PF	10%	50V
C604	1-126-961-11	ELECT	2.2uF	20%	50V
C605	1-126-964-11	ELECT	10uF	20%	50V
C606	1-162-291-31	CERAMIC	560PF	10%	50V
C607	1-126-964-11	ELECT	10uF	20%	50V
C608	1-164-159-11	CERAMIC	0.1uF		50V
C609	1-126-967-11	ELECT	47uF	20%	16V
C610	1-102-518-11	CERAMIC	33PF	5%	50V
C611	1-102-518-11	CERAMIC	33PF	5%	50V
C612	1-162-306-11	CERAMIC	0.01uF	20%	16V

< CONNECTOR >

CN601 1-779-939-11 CONNECTOR, BOARD TO BOARD 7P

< DIODE >

D601 8-719-911-19 DIODE 1SS119

< IC >

IC601 8-759-450-86 IC BU1922
IC602 8-759-634-51 IC M5218AP

Ref. No.	Part No.	Description			Remarks
		< COIL >			
L601	1-410-977-11	INDUCTOR	100uH		
		< RESISTOR >			
R601	1-249-401-11	CARBON	47	5%	1/4W F
R602	1-249-441-11	CARBON	100K	5%	1/4W
R603	1-249-441-11	CARBON	100K	5%	1/4W
R604	1-249-426-11	CARBON	5.6K	5%	1/4W
R605	1-249-429-11	CARBON	10K	5%	1/4W
R606	1-249-405-11	CARBON	100	5%	1/4W F
R607	1-249-417-11	CARBON	1K	5%	1/4W F
		< VIBRATOR >			
X601	1-579-900-21	VIBRATOR, CRYSTAL 4.332MHz			

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* 1-667-822-11 RELAY BOARD
****

< CAPACITOR >

C820	1-126-794-11	ELECT	4.7uF	20%	50V
C821	1-126-177-11	ELECT	100uF	20%	10V
C822	1-164-159-11	CERAMIC	0.1uF		50V
C823	1-164-159-11	CERAMIC	0.1uF		50V
C824	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

* CN812 1-569-502-11 PIN, CONNECTOR 7P
* CN813 1-691-174-11 CONNECTOR (BOARD TO BOARD) 4P
CN814 1-564-506-11 PLUG, CONNECTOR 3P

< DIODE >

D820 8-719-933-50 DIODE HZS7C2L
D821 8-719-933-39 DIODE HZS6C1L
D822 8-719-911-19 DIODE 1SS119
D823 8-719-911-19 DIODE 1SS119

< TRANSISTOR >

Q820 8-729-119-76 TRANSISTOR 2SA1175-HFE
Q821 8-729-620-05 TRANSISTOR 2SC2603-EF
Q822 8-729-620-05 TRANSISTOR 2SC2603-EF
Q823 8-729-620-05 TRANSISTOR 2SC2603-EF
Q824 8-729-140-96 TRANSISTOR 2SD774-34

< RESISTOR >

R820	1-249-417-11	CARBON	1K	5%	1/4W F
R821	1-249-441-11	CARBON	100K	5%	1/4W
R822	1-249-429-11	CARBON	10K	5%	1/4W
R823	1-249-441-11	CARBON	100K	5%	1/4W
R824	1-249-413-11	CARBON	470	5%	1/4W F
⚠R825	1-212-966-00	FUSIBLE	22	5%	1/2W F
R826	1-249-441-11	CARBON	100K	5%	1/4W
R827	1-249-441-11	CARBON	100K	5%	1/4W
R828	1-249-429-11	CARBON	10K	5%	1/4W

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
*	1-653-378-51	SENSOR BOARD			
		**********			
		< DIODE >			
D801	8-719-045-75	DIODE CL-200IR-X-TU			
D803	8-719-045-75	DIODE CL-200IR-X-TU			
D804	8-719-045-75	DIODE CL-200IR-X-TU			
		< RESISTOR >			
R801	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R803	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R804	1-216-049-91	METAL GLAZE	1K	5%	1/10W
		< SWITCH >			
S802	1-692-441-11	SWITCH, MICROPHONE			
**********					
*	1-667-386-11	SP TM BOARD			
		**********			
		< CAPACITOR >			
C806	1-164-159-11	CERAMIC	0.1uF		50V (AEP,G,UK)
C856	1-164-159-11	CERAMIC	0.1uF		50V (AEP,G,UK)
		< CONNECTOR >			
CN803	1-691-161-11	PIN, CONNECTOR 4P			
		< COIL >			
L801	1-420-872-00	COIL, AIR-CORE (AEP,G,UK)			
L851	1-420-872-00	COIL, AIR-CORE (AEP,G,UK)			
		< RESISTOR >			
R805	1-260-076-11	CARBON	10	5%	1/2W (AEP,G,UK)
R806	1-249-393-11	CARBON	10	5%	1/4W F (AEP,G,UK)
R855	1-260-076-11	CARBON	10	5%	1/2W (AEP,G,UK)
R856	1-249-393-11	CARBON	10	5%	1/4W F (AEP,G,UK)
		< TERMINAL >			
TM801	1-537-238-31	TERMINAL BOARD (SPEAKER IMPEDANCE USE 4-16 (L+,L-,R+,R-))			
**********					
*	1-667-385-11	SWITCH BOARD			
		**********			
		< CONNECTOR >			
CN751	1-766-928-11	CONNECTOR, BOARD TO BOARD 8P			
		< DIODE >			
D751	8-719-056-12	DIODE SML79420C-TP4 (PLAY/PAUSE)			

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R750	1-249-427-11	CARBON	6.8K	5%	1/4W F
R751	1-249-429-11	CARBON	10K	5%	1/4W
R752	1-247-858-11	CARBON	13K	5%	1/4W
R753	1-249-433-11	CARBON	22K	5%	1/4W
R762	1-249-425-11	CARBON	4.7K	5%	1/4W F
R763	1-249-427-11	CARBON	6.8K	5%	1/4W F
R764	1-249-429-11	CARBON	10K	5%	1/4W
R765	1-247-858-11	CARBON	13K	5%	1/4W
		< SWITCH >			
S751	1-762-875-21	SWITCH, KEYBOARD (DBFB)			
S752	1-762-875-21	SWITCH, KEYBOARD (VOL-)			
S753	1-762-875-21	SWITCH, KEYBOARD (VOL+)			
S754	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)			
S762	1-762-875-21	SWITCH, KEYBOARD (BAND)			
S763	1-762-875-21	SWITCH, KEYBOARD (TUNE-/ ◀◀ / I◀◀)			
S764	1-762-875-21	SWITCH, KEYBOARD (TUNE+/ ▶▶ / ▶▶I)			
S765	1-762-875-21	SWITCH, KEYBOARD (▷II PLAY/PAUSE)			
S766	1-762-875-21	SWITCH, KEYBOARD (■)			
**********					
*	1-667-384-11	TRANS BOARD			
		**********			
	1-533-293-11	FUSE HOLDER			
		< CONNECTOR >			
* CN902	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P			
CN905	1-691-770-11	PLUG (MICRO CONNECTOR) 8P			
		< FUSE >			
⚠F901	1-532-388-51	FUSE TIME, LAG 2A/250V			
**********					
*	1-667-382-11	VOLSEL BOARD (MY, SP, HK, JE)			
		**********			
	1-533-293-11	FUSE HOLDER			
		< CONNECTOR >			
* CN920	1-564-507-11	PLUG, CONNECTOR 4P			
		< FUSE >			
⚠F902	1-532-505-51	FUSE TIME, LAG 5A/250V			
⚠F903	1-532-505-51	FUSE TIME, LAG 5A/250V			
		< SWITCH >			
⚠S901	1-554-752-11	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR)			
**********					

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
13	1-782-805-11	WIRE (FLAT TYPE) (5 CORE)	
14	1-782-781-11	WIRE (FLAT TYPE) (27 CORE)	
54	1-782-780-11	WIRE (FLAT TYPE) (21 CORE)	
58	1-698-997-11	FAN, DC	
⚠65	1-776-060-11	CORD, POWER (EXCEPT UK)	
⚠65	1-776-061-21	CORD, POWER (UK)	
⚠72	1-569-008-11	ADAPTOR, CONVERSION 2P (SP,MY)	
⚠73	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	
⚠152	8-848-283-11	OPTICAL PICK-UP KSS-313A	
M101	X-3367-484-2	MOTOR (SP) ASSY (SPINDLE)	
M102	A-3252-585-A	MOTOR (SL) ASSY (SLED)	
M103	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
⚠T901	1-431-559-11	TRANSFORMER, POWER (AEP,G,UK)	
⚠T901	1-431-560-11	TRANSFORMER, POWER (SP,MY,HK,JE)	

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Ref. No.	Part No.	Description	Remarks
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-09	SCREW +BVTT 3X6 (S)	
#3	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#5	7-685-871-01	SCREW +BVTT 3X6 (S)	
#6	7-621-772-60	SCREW +B 2X12	
#7	7-627-852-17	+P 1.7X4	
#8	7-627-553-37	SCREW , PRECISION +P2X3	
#9	7-627-553-67	SCREW , PRECISION +P2X5	
#10	7-685-851-01	SCREW +BVTT 2X4 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-920-988-11

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Home A&V Products Company

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